

DE BOW'S REVIEW.

ESTABLISHED JANUARY, 1846.

SEPTEMBER, 1867.

ART. I.—NO TREASON.*

THE author has kindly given us permission to publish number one of his series of pamphlets on the grave question of treason to the Federal Government, which we noticed briefly in our June issue. The argument will be read with much interest by our readers everywhere, but especially in the south, as it embodies the carefully digested views and opinions of one who was bitterly opposed to the institution of slavery, but who now—that cause of dissension removed—stands almost alone among his former co-workers as a vindicator of the Constitution.

We desire to correct an error in our former statement that Mr. Spooner was a member of the Republican party. He writes us that he has never been connected with that party either in fact or sentiment; that, while always an ultra abolitionist, he has never been, nor is he now, a Republican.—EDITORS REVIEW.

INTRODUCTORY.

THE question of treason is distinct from that of slavery; and is the same that it would have been, if free States, instead of slave States, had seceded.

On the part of the North, the war was carried on, not to liberate the slaves, but by a government that had always perverted and violated the Constitution, to keep the slaves in bondage; and was still willing to do so, if the slaveholders could be thereby induced to stay in the Union.

The principle on which the war was waged by the North was simply this: That men may be rightfully compelled to submit to and support a government that they do not want; and that resistance on their part makes them traitors and criminals.

No principle that is possible to be named can be more self-evidently false than this, or more self-evidently fatal to all political freedom. Yet it triumphed in the field, and is now assumed to be established. If it be really established, the number of slaves, instead of having been diminished by the war, has been greatly increased; for a man, thus subjected to a government

* Entered according to Act of Congress, in the year 1867, by Lysander Spooner, in the Clerk's office of the District Court of the United States, for the District of Massachusetts.

that he does not want, is a slave. And there is no difference in principle, but only in degree, between political and chattel slavery. The former, no less than the latter, denies a man's ownership of himself and the products of his labor; and asserts that other men may own him and dispose of him and his property for their uses and at their pleasure.

Previous to the war, there were some grounds for saying that—in theory, at least, if not in practice—our government was a free one; that it rested on consent. But nothing of that kind can be said now, if the principle on which the war was carried on by the North is irrevocably established.

If that principle be *not* the principle of the Constitution, the fact should be known. If it *be* the principle of the Constitution, the Constitution itself should be at once overthrown.

I.

Notwithstanding all the proclamations we have made to mankind, within the last ninety years, that our government rested on consent, and that that was the only rightful basis on which any government could rest, the late war has practically demonstrated that our government rests upon force—as much so as any government that ever existed.

The North has thus virtually said to the world: It was all very well to prate of consent so long as the objects to be accomplished were to liberate ourselves from our connexion with England, and also to coax a scattered and jealous people into a great national union; but now that those purposes have been accomplished, and the power of the North has become consolidated, it is sufficient for us, as for all governments, simply to say: *Our power is our right.*

In proportion to her wealth and population, the North has probably expended more money and blood to maintain her power over an unwilling people than any other government ever did. And in her estimation, it is apparently the chief glory of her success, and adequate compensation for all her own losses, and an ample justification for all her devastation and carnage of the South, that all pretence of any necessity for consent to the perpetuity or power of the government, is (as she thinks) forever expunged from the minds of the people. In short, the North exults beyond measure in the proof she has given that a government, professedly resting on consent, will expend more life and treasure in crushing dissent than any government openly founded on force has ever done.

And she claims that she has done all this in behalf of liberty! In behalf of free government! In behalf of the principle that government should rest on consent!

If the successors of Roger Williams, within a hundred years after their State had been founded upon the principle of free religious toleration, and when the Baptists had become strong on the credit of that principle, had taken to burning heretics with a fury never before seen among men ; and had they finally gloried in having thus suppressed all question of the truth of the State religion ; and had they further claimed to have done all this in behalf of freedom of conscience, the inconsistency between profession and conduct would scarcely have been greater than that of the North in carrying on such a war as she has done, to compel men to live under and support a government that they did not want ; and in then claiming that she did it in behalf of the principle that government should rest on consent.

This astonishing absurdity and self-contradiction are to be accounted for only by supposing either that the lusts of fame, and power, and money have made her utterly blind to, or utterly reckless of, the inconsistency and enormity of her conduct ; or that she has never even understood what was implied in a government's resting on consent. Perhaps this last explanation is the true one. In charity to human nature, it is to be hoped that it is.

II.

What, then, is implied, in a government's resting on consent ?

If it be said that the consent of the *strongest party* in a nation is all that is necessary to justify the establishment of a government that shall have authority over the weaker party, it may be answered that the most despotic governments in the world rest upon that very principle, viz. : the consent of the strongest party. These governments are formed simply by the consent or agreement of the strongest party, that they will act in concert in subjecting the weaker party to their dominion. And the despotism, and tyranny, and injustice of these governments consist in that very fact. Or at least that is the first step in their tyranny ; a necessary preliminary to all the oppressions that are to follow.

If it be said that the consent of the *most numerous party* in a nation is sufficient to justify the establishment of their power over the less numerous party, it may be answered :

First. That two men have no more natural right to exercise any kind of authority over one than one has to exercise the same authority over two. A man's natural rights are his own, against the whole world ; and any infringement of them is equally a crime, whether committed by one man or by millions ; whether committed by one man, calling himself a robber (or by

any other name indicating his true character), or by millions, calling themselves a government.

Second. It would be absurd for the most numerous party to talk of establishing a government over the less numerous party, unless the former were also the strongest, as well as the most numerous; for it is not to be supposed that the strongest party would ever submit to the rule of the weaker party, merely because the latter were the most numerous. And as matter of fact, it is perhaps never that governments are established by the most numerous party. They are usually, if not always, established by the less numerous party; their superior strength consisting in their superior wealth, intelligence and ability to act in concert.

Third. Our Constitution does not profess to have been established by the majority, but by "the people;" the minority as much as the majority.

Fourth. If our fathers, in 1776, had acknowledged the principle that a majority had the right to rule the minority, we should never have become a nation; for they were in a small minority as compared with those who claimed the right to rule over them.

Fifth. Majorities, *as such*, afford no guarantees for justice. They are men of the same nature as minorities. They have the same passions for fame, power and money as minorities, and are liable and likely to be equally—perhaps more than equally, because more boldly—rapacious, tyrannical and unprincipled, if intrusted with power. There is no more reason, then, why a man should sustain or submit to the rule of a majority than of a minority. Majorities and minorities cannot rightfully be taken at all into account in deciding questions of justice. And all talk about them, in matters of government, is mere absurdity. Men are dunces for uniting to sustain any government or any laws, *except those in which they are all agreed*. And nothing but force and fraud compel men to sustain any other. To say that majorities, as such, have a right to rule minorities, is equivalent to saying that minorities have, and ought to have, no rights, except such as majorities please to allow them.

Sixth. It is not improbable that many or most of the worst of governments—although established by force, and by a few, in the first place—come, in time, to be supported by a majority. But if they do, this majority is composed, in large part, of the most ignorant, superstitious, timid, dependent, servile and corrupt portions of the people; of those who have been over-awed by the power, intelligence, wealth and arrogance; of those who have been deceived by the frauds, and of those who have been corrupted by the inducements of the few who really constitute the government. Such majorities, very likely, could be found in

half, perhaps in nine-tenths, of all the countries on the globe. What do they prove? Nothing but the tyranny and corruption of the very governments that have reduced so large portions of the people to their present ignorance, servility, degradation and corruption; an ignorance, servility, degradation and corruption that are best illustrated in the simple fact that they *do* sustain the governments that have so oppressed, degraded and corrupted them. They do nothing towards proving that the governments themselves are legitimate; or that they ought to be sustained, or even endured, by those who understand their true character. The mere fact, therefore, that a government chances to be sustained by a majority, of itself proves nothing that is necessary to be proved, in order to know whether such government should be sustained or not.

Seventh. The principle that the majority have a right to rule the minority practically resolves all government into a mere contest between two bodies of men, as to which of them shall be masters, and which of them slaves; a contest that, however bloody, can, in the nature of things, never be finally closed so long as man refuses to be a slave.

III.

But to say that the consent of either the strongest party or the most numerous party *in a nation* is a sufficient justification for the establishment or maintenance of a government that shall control the whole nation, does not obviate the difficulty. The question still remains, how comes such a thing as "a nation" to exist? How do many millions of men, scattered over an extensive territory—each gifted by nature with individual freedom; required by the law of nature to call no man, or body of men, his masters; authorized by that law to seek his own happiness in his own way, to do what he will with himself and his property, so long as he does not trespass upon the equal liberty of others; authorized also, by that law, to defend his own rights and redress his own wrongs, and to go to the assistance and defence of any of his fellow men who may be suffering any kind of injustice—how do many millions of such men *come to be a nation*, in the first place? How is it that each of them comes to be stripped of all his natural, God-given rights, and to be incorporated, compressed, compacted and consolidated into a mass with other men whom he never saw, with whom he has no contact, and towards many of whom he has no sentiments but fear, hatred, or contempt? How does he become subjected to the control of men like himself, who, by nature, had no authority over him; but who command him to do this, and forbid him to do that, as if they were his sovereigns and he their subject; and as if their

wills and their interests were the only standards of his duties and his rights ; and who compel him to submission under peril of confiscation, imprisonment and death ?

Clearly, all this is the work of force, or fraud, or both.

By what right, then, did *we* become "a nation?" By what right do we continue to be "a nation?" And by what right do either the strongest or the most numerous party now existing within the territorial limits called "The United States," claim that there really *is* such "a nation" as the United States? Certainly, they are bound to show the rightful existence of "a nation" before they can claim, *on that ground*, that they themselves have a right to control it ; to seize, for their purposes, so much of every man's property within it as they may choose ; and, at their discretion, to compel any man to risk his own life, or take the lives of other men, for the maintenance of their power.

To speak of either their numbers or their strength is not to the purpose. The question is, by what *right* does the nation exist? And by what *right* are so many atrocities committed by its authority or for its preservation?

The answer to this question must certainly be, that at least *such a nation* exists by no right whatever.

We are, therefore, driven to the acknowledgment that nations and governments, if they can rightfully exist at all, can exist only by consent.

IV.

The question, then, returns, What is implied in a government's resting on consent?

Manifestly, this one thing (to say nothing of others) is necessarily implied in the idea of a government's resting on consent, viz. : *the separate, individual consent of every man who is required to contribute, either by taxation or personal service, to the support of the government.* All this, or nothing, is necessarily implied, because one man's consent is just as necessary as any other man's. If, for example, A claims that his consent is necessary to the establishment or maintenance of government, he thereby necessarily admits that B's and every other man's are equally necessary ; because B's and every other man's rights are just as good as his own. On the other hand, if he denies that B's or any other particular man's consent is necessary, he thereby necessarily admits that neither his own nor any other man's is necessary, and that government need not be founded on consent at all.

There is, therefore, no alternative but to say, either that the separate, individual consent of every man *who is required to*

aid, in any way, in supporting the government, is necessary, or that the consent of no one is necessary.

Clearly, this individual consent is indispensable to the idea of treason; for if a man has never consented or agreed to support a government, he breaks no faith in refusing to support it. And if he makes war upon it, he does so as an open enemy, and not as a traitor—that is, as a betrayer or treacherous friend.

All this, or nothing, was necessarily implied in the Declaration made in 1776. If the necessity for consent then announced was a sound principle in favor of three millions of men, it was an equally sound one in favor of three men, or of one man. If the principle was a sound one in behalf of men living on a separate continent, it was an equally sound one in behalf of a man living on a separate farm or in a separate house.

Moreover, it was only as separate individuals, each acting for himself, and not as members of organized governments, that the three millions declared their consent to be necessary to their support of a government; and, at the same time, declared their dissent to the support of the British Crown. The governments then existing in the Colonies had no constitutional power, *as governments*, to declare the separation between England and America. On the contrary, those governments, *as governments*, were organized under charters from, and acknowledged allegiance to, the British Crown. Of course, the British king never made it one of the chartered or constitutional powers of those governments, *as governments*, to absolve the people from their allegiance to himself. So far, therefore, as the Colonial Legislatures acted as revolutionists, they acted only as so many individual revolutionists, and not as constitutional legislatures. And their representatives at Philadelphia, who first declared independence, were, in the eye of the constitutional law of that day, simply a committee of revolutionists, and in no sense constitutional authorities, or the representatives of constitutional authorities.

It was also, in the eye of the law, only as separate individuals, each acting for himself and exercising simply his natural rights as an individual, that the people at large *assented to and ratified the Declaration*.

It was also only as so many individuals, each acting for himself and exercising simply his natural rights, that they revolutionized the *constitutional character* of their local governments (so as to exclude the idea of allegiance to Great Britain); changing their forms only as and when their convenience dictated.

The whole revolution, therefore, as a revolution, was declared and accomplished by the people, acting separately as individuals

and exercising each his natural rights, and not by their governments in the exercise of their constitutional powers.

It was, therefore, as individuals, and only as individuals, each acting for himself alone, that they declared that their consent—that is, their individual consent, for each one could consent only for himself—was necessary to the creation or perpetuity of any government that they could rightfully be called on to support.

In the same way each declared for himself, that his own will, pleasure and discretion were the only authorities he had any occasion to consult in determining whether he would any longer support the government under which he had always lived. And if this action of each individual were valid and rightful when he had so many other individuals to keep him company, it would have been, in the view of natural justice and right, equally valid and rightful if he had taken the same step alone. He had the same natural right to take up arms alone to defend his own property against a single tax-gatherer that he had to take up arms in company with three millions of others to defend the property of all against an army of tax-gatherers.

Thus the whole Revolution turned upon, asserted, and, in theory, established the right of each and every man, at his discretion, to release himself from the support of the government under which he had lived. And this principle was asserted, not as a right peculiar to themselves, or to that time, or as applicable only to the government then existing, but as a universal right of all men, at all times and under all circumstances.

George the Third called our ancestors traitors for what they did at that time. But they were not traitors *in fact*, whatever he or his laws may have called them. They were not traitors in fact, because they betrayed nobody, and broke faith with nobody. They were his equals, owing him no allegiance, obedience, nor any other duty, except such as they owed to mankind at large. Their political relations with him had been purely voluntary. They had never pledged their faith to him that they would continue these relations any longer than it should please them to do so; and therefore they broke no faith in parting with him. They simply exercised their natural right of saying to him, and to the English people, that they were under no obligation to continue their political connexion with them, and that, for reasons of their own, they chose to dissolve it.

What was true of our ancestors is true of revolutionists in general. The monarchs and governments from whom they choose to separate attempt to stigmatize them as traitors. But they are not traitors in fact, inasmuch as they betray and break faith with no one. Having pledged no faith, they break none. They are simply men, who, for reasons of their own—whether good or

bad, wise or unwise, is immaterial—choose to exercise their natural right of dissolving their connexion with the governments under which they have lived. In doing this, they no more commit the crime of treason—which necessarily implies treachery, deceit, breach of faith—than a man commits treason when he chooses to leave a church or any other voluntary association with which he has been connected.

This principle was a true one in 1776. It is a true one now. It is the only one on which any rightful government can rest. It is the one on which the Constitution itself professes to rest. If it does not really rest on that basis, it has no right to exist; and it is the duty of every man to raise his hand against it.

If the men of the Revolution designed to incorporate in the Constitution the absurd ideas of allegiance and treason which they had once repudiated, against which they had fought, and by which the world had been enslaved, they thereby established for themselves an indisputable claim to the disgust and detestation of all mankind.

In subsequent numbers the author hopes to show that, under the principle of individual consent, the little government that mankind need is not only practical, but natural and easy; and that the Constitution of the United States authorizes no government except one depending wholly on voluntary support.

ART. II.—MANDEVILLE'S FABLE OF THE BEES;

OR,

PRIVATE VICES, PUBLIC BENEFITS.

Is exploitation, dishonesty? We have in our hands the third edition of above named work, printed in London, in 1724. It was probably written a century and a half ago. No author's name appears in our edition, but we know from a late edition, that it is the work of a Doctor Mandeville, a native of Amsterdam, but who lived most of his life in England, and became master of the English language. The book excited much indignation soon after its publication, and was violently assailed and abused in the press, and was presented by the grand jury of Middlesex. A calm reply from any one at all versed in Sociological science would have speedily refuted and exposed its sophistry, and disarmed it of all power of doing evil; but no one then had studied the science of Sociology, and the doctor was un

answerable, because, imperfect as is his argument, and crude and false as are his conclusions, he was a century ahead of his contemporaries, and incidentally announces some new and professed truths, only half understood, however, by himself. He is deceived by names, and mistakes virtues for vices, and vices for virtues, but as the public he addressed labored under the same mistakes, it was not very difficult for him to make out an unanswerable case against existing social arrangements and practices, and to show, according to the prevailing moral nomenclature, that "Private vices were Public Benefits."

It is amusing to observe, in this instance, as in a thousand others in history, how men's reason lags behind their instinct. They felt, or perceived, at once, intuitively and instinctively, that the book was a dangerous libel on human nature, and became the more enraged because their reasoning faculties suggested no arguments by which it could be refuted. Instinct, or intuition, comes to its conclusions more rapidly than reason, and yet comes to more truthful conclusions. We do not believe, that to this day, any one has succeeded in replying to the author's arguments, although few have become converts to his doctrines and conclusions.

The Fable of the Bees is a poem of a few hundred lines, written in a doggerel Hudibrastic verse. It is intended metaphorically to represent a state that has grown rich, powerful and enlightened by the practice of individual vices, and which is afterwards reduced to weakness, poverty and barbarism, by the miraculous introduction of universal justice, honesty, content, and all the other virtues. The metaphor is very poorly sustained. Indeed, it is obvious, from the start, that the author wishes the reader to understand that his bees are men. The explanatory notes, written in prose, carry out the argument, and occupy five times as much space as the poem itself. The conclusion which he comes to, in the first part of his poem, is thus expressed :

Thus vice nursed by Ingenuity,
Which joined with Time and Industry,
Had carried Life's conveniences,
Its real Pleasures, Comforts, Ease,
To such a height, the very Poor
Lived better than the rich before,
And nothing could be added more.

This is a just description of a highly civilized, prosperous and wealthy state, but it is private virtues, not private vices, that build up and sustain such a state.

In the concluding portion of the poem, he very truthfully depicts the ruinous and barbarizing efforts of too much control, and what he terms *honesty*. If that emulation, that rivalry, that

thirst for accumulation and wealth, that love of luxury and costly ostentation, and that ambitious desire of power, that instigate and impel man in all civilized countries to endeavor to excel each other, and to make one another subservient to each other, be vicious and dishonest, then individual vice and dishonesty are essential to public weal, and men to be honest must become destitute, contented savages. But we will cite a few passages from the latter part of the poem, which will show that our author was a profound thinker for his day, and although he did not attain to truth, advanced much nearer to it than any of his predecessors or cotemporaries :

"As Trade and Luxury decrease,
So by degrees they leave the Seas,
Not merchants now, but companies,
Remove whole manufactories ;
CONTENT, THE BANE OF INDUSTRY,
Makes them admire their homely store,
And neither seek nor covet more."

Again, he concludes thus :

"Hardened with Toil and Exercise,
They counted ease itself a vice,
Which so improved their Temperance,
That to avoid Extravagance
They flew into a hollow tree,
Blest with Content and Honesty."

The following admirable and truthful sarcasm, concludes the poetic moral attached to the Fable :

"—— they, that would revive
A Golden Age, must be as fierce,
For acorns, as for Honesty."

Content and honesty, in their popular sense and meaning, are virtues. Carried to excess, they become vices. And when practised in such excess, should be called by other names. Content becomes criminal apathy, when it begets indolence, improvidence, and destitution, as among savages ; for them it begets the most violent, thievish, rapacious form of discontent. However, savages, contented so long as immediate and pressing wants are gratified, are under such circumstances the most amiable of human beings. But when content, indolence and improvidence superinduce the cravings of hunger, they are at once converted into the most rapacious, cruel and murderous beasts that roam the forest. Columbus and Mungo Park at first met with them in their amiable moods, and depicted them as the mildest and best of human beings. Homer, no doubt, heard similar accounts from a few adventurous traders, who had seen them under similar circumstances, and hence he makes them fit hosts and companions of the gods themselves. That excess of content that begets, in civilized individuals, and in savage tribes, indolence and

improvidence, is one of the worst of vices, because it leads to the commission of the vilest crimes. On the other hand, that discontent, that among civilized men begets rivalry, and envy, and desire of accumulation of wealth, and industry, and competition, and the continual struggle to make others subservient to us, either by the exercise of superior skill, or by the wielding of accumulated capital, all these are the peculiarities of civilized races, implanted in their nature by God, and essential to the well-being of individuals, as well as to the prosperity, wealth, and enlightenment of states, and when *moderately* indulged, are not vices, but useful and necessary virtues; because by warding off extreme want and destitution, they enable men to avoid those temptations that lead to theft, violence, robbery and murder. We must judge and determine of human conduct by its consequences, and class among good and virtuous actions, those whose practise tends to advance individual and public good. We are all struggling to exploit each other; that is, to obtain the greatest possible amount of the results of other people's labor, for the least possible amount of the results of our own labor, and he who succeeds best in this war of competition, and exploitation, is considered most meritorious. Hence, the learned lawyer is more esteemed by society than the retail dealer, the merchant than the mechanic, the mechanic more than the common day laborer, the wealthy capitalist, who labors not at all, but lives by the exploitation of his capital more esteemed and admired than any. One of the merits of the upper classes is, that their love of luxurious living and ostentatious display, begets and encourages skill and invention in those who supply their wants. Poverty and wealth are equally essential to civilization, for without poverty there would be little or no labor, and without wealth to stimulate and reward it, there would be no skill, invention, or improvement—men never produce luxuries for themselves. No man would build himself a fine house, and fabricate for himself fine furniture and clothing. He would sooner live in a hollow tree, and dress in skins. Men produce luxuries for others, to procure necessities for themselves. Without wealth there could be no civilization, and without exploitation, (that is the appropriation by a few of the results of the labor of the many,) there could be no wealth; for men become rich not by their own labor, but by exploiting other people's labor. They who own the soil, own everything on it—men included; but it is far better to be thus owned, than that all should be equal joint owners of the soil, for then there would be none to pay for luxuries,—and what is far worse, none to necessitate and compel to industry. The owners of the soil in requiring industry of their tenants, and exploiting even half

of the results of that industry, as rent, or the condition on which they shall live and subsist on the soil, still, leave their tenants far better situated than idle, improvident savages, who have to pay nothing for the use of the soil. History informs us, that the ancient Britons lived on acorns, although lands were cheap and abundant. Had lands been closely monopolized, they would not have been permitted to gather acorns, but compelled for a living to cultivate the land, paying a high rent. Thus compelled to labor, and thus exploited of a large part of the results of their labor, they would have become civilized and provident, and much better off than idle, barbarous, acorn-eaters. The very paupers of England suffer much less hunger and other wants, than the ancient Britons, or than any savages and barbarians. A large portion of the population of Corsica lives on chestnuts, and is but semi-civilized. Some one suggested that the chestnut trees should be felled. Proudhon, properly replies ; " it would make them private property."

Exploitation, or profit making, has often been likened to slavery, in its efforts on the exploited class, and by some writers confounded with slavery. There is nothing in a name. So long as the exploited classes are benefited, exploitation, whether it beget slavery or not, is a virtue not a vice. If a species of dishonesty, in the abstract sense of the term, it is practically, and in the proper sense, no dishonesty, until it degenerates into excess, and then it becomes cheating, over-reaching, or swindling, and is destitute of both private and public well-being. Its practice within moderate bounds is entirely consistent with the Golden Rule of Scripture. None of us in after life would complain of that exploitation which in early life compelled us to studious, industrious, economical habits, and enabled us thereby, despite its taxation, to acquire wealth or independence. Practising it for such purposes, " we are but doing as we would be done by."

That ideal, abstract honesty, which consists in exchanging equal amounts of labor for each other, and allowing no rents or interest for capital, because capital does not labor, and is non-productive,—is wholly impracticable, and if practicable would be a vice instead of a virtue, because it would banish industry, skill, provident habits, wealth and accumulation, and beget idleness, improvidence, ignorance, barbarism, frequent famines, and terrible crimes. Yet it is the disregard of this ideal, excessive, abstract honesty, which Mandeville considers one of the private vices, that are " public benefits."

The tendency of liberty and political equality is to beget excess of trade, speculation and competition, and consequent excess of exploitation. The whole weight of this exploitation is ulti-

mately cast upon the poor, weak and ignorant, the hirelings and day laborers, who are exploited by all above them, and who can exploit nobody. Their condition can be rendered much worse than that of domestic slaves, for it is the interest of the master to take care of his slaves, and besides, domestic affection impels him to do so—not so with the employer of free laborers. Where population is dense, land scarce and dear, and laborers in excess of demand for labor, there is nothing to restrain the rapacity and exploitation of landlords and employers, and self interest incites them to its most vigorous and excessive exercise. Hence, we have ever contended, and *still contend*, that where there is a well defined inferior race, they are better off as protected slaves, than as freemen, exposed to the merciless exploitation of a superior race. There is too much of exploitation at the North, occasioned by excess of liberty, speculation, and free trade, and consequently too much over-grown and suddenly acquired wealth among the few, and too much of crime and pauperism among the masses. Without adopting slavery, they might adopt some of its protectioned conservative features. There were some good points in that now condemned institution. Population never becomes excessive in slave countries. Pauperism is almost unknown in such countries, and crime very rare.

But does not exploitation of capital virtually beget slavery, but slavery without its protective features? We leave it to Mr. Stephen Pearle Andrews, a distinguished socialist to answer, because he puts the argument better than we could. He says: "The philanthropy of the age is moving heaven and earth to the overthrow of the institution of slavery. But slavery has no scientific definition. It is thought to consist in the feature of chattelism, but an ingenious lawyer would run his pen through every statute on the subject of slavery in existence, and expunge that fiction of the law, and yet leave slavery for all practical purposes forever what it now is. It needs only to appropriate the services of the man, by operation of the law, instead of the man himself. The only distinction then between his condition and that of the laborer, who is robbed by the operation of a false commercial principle, would be in the fact of the oppression being more tangible, and undisguisedly degrading to his manhood.

"If in any transaction I get from you a part of your earnings, without an equivalent, I begin to make you a slave, to confiscate you to my uses; if I get a larger portion of your services without an equivalent, I make you still further my slave; and finally, if I obtain the whole of your services, without an equivalent,—except the means of keeping you in working condition for my

own sake—I make you completely my slave. Slavery is merely one development of a general system of human oppression, for which we have no comprehensive term in English, but which the French Socialists denominate *exploitation*,—the abstraction directly or indirectly from the working classes of the fruits of their labors.”

In the case of the slave, the instrument of that exploitation is force and legal enactments. In the case of the laborer, generally, it is speculation in the large sense, or *profit-making*.

As we are all trying to appropriate the earnings or services of others without an equivalent, all trying to exchange as little as possible of the results of our own labor, for as much as possible of the labor of other people, nay, all bent on becoming independent, so as to live without labor, by commanding the labor of other people by means of our capital, without expending a cent of it, by virtue of a magic power which capital has for begetting income, though no laborer or producer,—we must all according to Mr. Andrews, be engaged in the Slave Trade. And why not, if it be the trade that civilizes and enriches mankind, the trade of which all other trades are mere parts or tributaries. In truth, human labor is the only *valuable* property, and the Slave trade the only trade—for all men are laboring to obtain what possesses value.

ART. III.—ON THE COLLECTION OF REVENUE.

(Continued from our last number.)

I HAVE defined capital to be the surplus result of labor not consumed, but put into a form for further use. The bonds or evidences of debt of the country must not be confused with the capital of the nation; they may represent capital to an individual, but to the community they can only represent a burden.

The utter ignorance of this economic law was not long since exhibited by the publication of a pamphlet entitled, “A National Debt a National Blessing.” The same ignorance is constantly to be observed in the Congressional debates upon the currency, which would be amusing, if it were not dangerous; we may, however, feel tolerable assurance that there is wisdom enough to resist any further inflation. Those who propose the issue of more legal-tender notes are rapidly losing the confidence and even the respect of the community, and must soon cease their dangerous effort, unless they wish to be held responsible by an outraged community for attempting to steal from labor its reward, and to be esteemed not only willfully ignorant, but intentionally criminal.

The absurd dogma, that a national debt is a national blessing,

hardly needs notice, yet it may not be amiss to give a word to it. During the war, a portion of the productions of the country were taken and used. For what? For destruction not only of the products thus taken, but of other accumulated capital. What was given for such productions? An evidence of debt,—the interest, and finally the principal, of which must be gathered from the future production of the people. Who holds these evidences of debt? A portion of the people who are thereby enabled to live without work, on an income derived from property, which, while it represents property to the owner, represents only destruction of capital to the community.

Suppose a town wishes to build a school house, and it employs one man who cuts and frames the timber, makes the bricks and erects the building, receiving while thus employed his food and clothing, and at the completion of the building an annuity of three hundred dollars as long as he lives, on which sum he can live without further work; and suppose that he chooses to do so. The town has the service of the school-house in which its children are taught and thereby made more effective in their work; their productive capacity is so much increased by the service rendered them by the school-house as to give them six hundred dollars more per year than they would have made without it; then their gain is three hundred dollars above the annuity. But suppose the school-house is destroyed by fire the day it is finished: the annuity remains, and the man who receives it is as much a burden as if he were a pauper or a cripple; he lives by the labor of others, consuming only and not producing. Such is the evil of debt incurred for the purpose of war. Yet active, destructive war may be—as was our late war—a vast benefit; because it destroyed slavery, a condition of passive but destructive war of the most injurious kind, far worse in its effects than the active war by which it was destroyed.

The result of slave labor has not been, and cannot be, the accumulation of any large amount of capital. It yielded a certain product at the cost of the natural fertility of the soil,—witness the testimony of one of the most intelligent southern writers, Dr. Cloud of Alabama, who says, "If the country or the climate has been cursed in our appearance as planters here, it has been in the wasting system that we introduced and continue to practise." Then, after defining the great natural advantages of Alabama, he continues, "If this condition of things be fact, why is it that we find so many wealthy cotton planters, whose riches consist entirely of slaves and worn-out plantations?"

There is a great prejudice against having our bonds held abroad, but I think this is a very ignorant prejudice. It is much better that the bonds should be held out of the country than in it, if the holder intends to live upon the interest. Let me illustrate.

Suppose a community of six persons, five of whom are employed for a year in draining a swamp, while the other one raises the food on which the six live,—he having capital in the form of farm-tools,

horses, etc. For his services in raising food, he receives a bond of \$1,000, the interest on which is to be raised by a tax on the whole future product of the six; but the capitalist who holds the bond can live on the interest, and refuses to produce anything more: then have not the five to support six? On the other hand, the capitalist sends the bond to another community, and procures for it a thousand dollars worth of better tools than he had before, and continues to work: the interest is still only sixty dollars, but there is the product of six plus the product of the improved tools to assess the tax upon. The interest is the same but the product greater.

If we send our bonds to Europe, and get for them, as will hereafter be proved, five parts good tools, or of the comforts of life, to one part of luxuries, we make a good bargain, and are much better off than if we retained them here, and, by so doing, released a part of our own people from work.

But a tax of a given amount, even for interest on bonds, may be either a burden too grievous to be borne, or it may be slight in its effect, the given amount being the same in each case,—upon which point some further remarks will be made hereafter.

The greatest progress of a country will be secured by the application, on the part of the people, of the greatest number of hours of labor, consistent with health and education, to the production of raw materials yielded by the soil or the mines, or in preparing such raw materials for use by the process called manufacturing. We may be sure that God has indicated the direction in which such labor can be expended with the best results, by giving to different countries different conditions of soil and climate; and that to interfere with the natural distribution of labor in accordance with these great laws, as has been done by all so-called protective legislation, is to cramp civilization and prevent the spread of Christianity throughout the world.

Commerce is the most effective agent of civilization, but protection, if carried to its legitimate result, would cause each nation to satisfy, as far as possible, all its desires within its own limits, and there could be no foreign commerce.

To illustrate this point. The Kaffir of South Africa was formerly a savage warrior: he is now a peaceful shepherd in whom some of the desires of civilized life have been developed. How has this come about? By the desire of the civilized men of Europe and America for a kind of wool which the climate and soil of South Africa will produce. It happens that, upon the hills of South Africa, wool can be raised with no labor except that of the shepherd to tend the sheep and the annual shearing, but the wool is absolutely useless in that climate. On the other hand, wheat, tobacco, butter, cheese, iron-ware and tools cannot be raised or made there at all. What has happened from these conditions? The first settlers tempted the Kaffirs to become shepherds by offering them good bread, butter, cheese, iron, and other luxuries

hitherto unknown to them, but yet real necessities for the full development of the manhood in them. Europe and America took the wool and gave the wheat.

But now the United States say, or rather Ohio says, We can raise all this wool. True; but instead of expending only the labor of a Kaffir, who can do nothing else, we must build great barns to protect our sheep in our cold winter, we must employ farmers to raise hay and roots to feed them; and we must expend two days labor of a civilized man, where the half-civilized Kaffir need expend but one,—yet we ought to be protected in our labor: we, the educated, civilized men of Ohio and Vermont and Massachusetts need to be protected against that poor, half-civilized creature,—we are afraid of him. God has given him more sunshine and a better position than ours, and, if he advances, we shall be degraded.

Suppose Europe were equally afraid of the poor Kaffir, and protected itself against his wool;—what would become of it? No one would give him wheat or any other commodity for it; he cannot eat it or wear it, and it is the only thing he can raise; if he cannot sell it, he must cease to work, cease progress, relapse into barbarism,—all the missionaries in creation could not save him. Yet, if protection against the Kaffir's wool is good for America, it is good for Europe and ought to be adopted. Is it not true, then, that the logical result of protection is to cramp civilization and check the spread of Christianity?

But, says the advocate of protection, when driven from the prohibitive doctrine, we only want such incidental protection as will come from a revenue tariff. The answer is that there can be no such thing as protection in a true revenue tariff, because just so far as a tariff stimulates the home production of the commodity upon which the duty is imposed, just so far it prevents the importation of that commodity, and therefore it so far fails to yield revenue. A true revenue duty must always be at a rate less than the one which will carry the cost of the commodity so high as to induce its production at home.

There can, it is true, be no tariff, except one that simply imposes duties on commodities which cannot be produced at all in the country which imposes it, without its affording some stimulus to the production of articles which would not otherwise be produced, and this is the protection incidental to a tariff. But it is a fault in the tariff as a revenue measure, and not a merit.

Take the case of the Kaffir's wool again. Ten cents' worth of wheat will buy of him a pound of wool. The Ohio farmer can furnish ten cents' worth of wheat, we will say, by one hour's labor; but a pound of wool will cost him two hours' labor, or twenty cents.

Now, if you put a revenue duty of eight cents on the wool raised by the Kaffir, it will still come; as its total cost in the United States will still be only eighteen cents. The Ohio farmer will still

make wheat to exchange for it, only we shall get less wool for the wheat; but, if you impose a duty which involves any incidental protection or any other kind of protection, it must be over ten cents so as to raise the cost of the Kaffir wool to over twenty cents. Suppose you put the duty twelve cents, then the Ohio farmer is protected, and can make it for less than its cost plus the duty; the Ohio farmer gives up raising wheat, but expends twice the labor on wool; commerce with the Kaffir ceases; woollen cloths cost double; the Government has no revenue; the civilized man has put his two hours' labor against the Kaffir's one, and by means of protection has won the game; the Kaffir relapses into barbarism, and that is the end of it: but is the civilized man any better off than he was before? He has now to pay a direct tax for the support of the Government and has less time to work it out than he had before. And this leads us to the second point, viz., that a tariff is a tax under another name, and that a tax of any kind can only be more or less of a burden upon those who pay it.

I may be more stupid than other people, and, at the risk of being considered so, I must say that the common arguments used in regard to a tariff, by the advocates of what is called protection to American industry, would lead an ignorant man to suppose that the Government was conferring a great favor upon the people by making the commodities which they wish to purchase of foreigners cost them more than the foreigners are willing to sell them for.

The first question to be asked is, What is the object of a tariff? To which question I think very few men would make the one answer which is complete, viz., to raise a certain amount of money with which to pay the expenses of the Government. Very many would qualify this answer by adding, "To raise money, and to develop the resources of the country." But let us look a little deeper. Would any nation impose a tariff of duties, if it had no expenses to meet, if it had no money to raise? The answer is simply, No: of course not. Why not, if by a tariff the resources of the country will be developed? Can any one reply to this?

Next, let us examine into the nature of the expenses of Government. They are, 1st, The support of the army and navy. Are they productive? Not at all: their purpose is war, which is destruction. 2d, Interest on the national debt. Is it productive? No; it represents only the destruction of capital caused by the late war. 3d, The Pension List and the expense of the civil service. Are they productive? Not at all: the pensioners are still representatives of the destruction of war, and the civil officers of the Government, while necessary to give organization and protection to production, do not themselves add anything to the aggregate of material product, but simply consume a portion of it.

All the material of war, and all the dwellings, food and clothing of the officers of the Government, must therefore be provided by

the labor of the people. "But," answers some one [who is still in the state of haziness which obscured the vision of the writer for a long time], "if all these expenses are paid by a tariff, how are they provided by the labor of the people?" Because all foreign commodities imported are the result of the labor of the people of foreign countries, for which we exchange commodities which are the result of the labor of our own people (two of our commodities or products being gold and silver); and, if the Government adds to the cost of the foreign commodity by the imposition of a duty, it will take so much more of the home commodity to pay for it. Let us suppose that we can produce a given quantity of wheat with the expenditure of a less number of days' labor than are required in England, and England can produce a given quantity of iron with a less number of days' labor than are required in the United States: of course, we shall exchange wheat for iron. The Government then imposes a duty upon iron, its object being to procure money for the payment of its expenses. If any revenue is expected from the duty on iron, it must represent less than the difference in the labor required in England to produce iron as compared with the labor required in the United States.

One of the great articles of production of Pennsylvania is wheat; the annual value of her wheat is more than the annual value of all her iron and its manufactures. In Pennsylvania, nature has indicated that wheat and other grain would yield the largest result for the least labor, and that grain should be the chief product, until such time as the general supply had become so great as not to yield so large a return for the labor employed as would come from working her vast deposits of iron.

At the time Pennsylvania was settled, England had already established iron works, because nature had indicated iron as one of the natural products of England, by placing there great beds of coal and iron, and but a comparatively small area of arable land.

The farmer of Pennsylvania wants iron, which exists in its crude form under his own farm. England wants wheat. Let us suppose that, under the circumstances as they are in Pennsylvania, the farmer of Pennsylvania can produce a ton of wheat with twenty days' labor and a ton of iron with thirty days' labor, and let us suppose that, under the circumstances as they are in England, the Englishman can produce a ton of iron with twenty days' labor but it takes him thirty days to raise a ton of wheat.

The Englishman wants wheat, and the Pennsylvanian wants iron; exchange is free and the barter is made. It is not necessary to express the exchange in money. It is so many days' labor against so many days' labor. The desires of both are satisfied by an aggregate of forty days' labor, resulting in a ton of wheat and a ton of iron,—each where it is wanted. The element of transportation may be omitted, as the same conditions apply to Canada and the United States, which are only divided by an imaginary line.

But now comes in the Government of the United States and claims a portion of the labor of the Pennsylvanian,—say six days, and each day's labor is measured in Pennsylvania by one dollar. The Government imposes a duty of six dollars on a ton of iron. But as the ton of iron would cost the Pennsylvanian thirty days' labor, or thirty dollars, he will still give twenty days to wheat, six days to the Government, and import his iron. The Englishman will still expend twenty days on iron and exchange it for wheat.

The desire of the Pennsylvania farmer for iron, of the Englishman for wheat, and of the United States Government for \$6, will all be satisfied by an aggregate of forty-six days' labor.

But the great iron resources of Pennsylvania are not protected; they must be developed, and Government is induced to put a protective duty of \$12 on a ton of iron: but \$12 represents twelve days' labor for the Pennsylvanian, who wants iron, and therefore it is better for him to give thirty days to making a ton of iron, rather than twenty to wheat, and twelve to the tax. He does so, and gets his iron. The Englishman, having no market for his iron, and wanting wheat, must give thirty days to raising a ton of wheat. The desires of the Englishman and of the American are both met by an aggregate of sixty days' labor. But the United States has no revenue; it wants \$6, but, having been deluded into imposing a protective tariff, it did not get it, and must now impose a direct tax on the Pennsylvanian equal to six days' labor. The three desires are therefore satisfied only by an aggregate of sixty-six days' labor.

To sum up,—

The Revenue Tariff satisfied the three desires with 46 days.

The Protective Tariff, with 66 "

Waste of labor 20 "

Disregarding all comity with the Englishman, the Pennsylvanian's desire is satisfied.

And he pays \$6 tax to the Government, under a

Revenue Tariff, with 26 days.

Under the Protective Tariff, with 36 "

Waste of home labor 10 "

Any one who has read Prof. Perry's admirable book will see that I owe this demonstration to him.

If we wish to understand how the great iron deposits of Pennsylvania would be developed in a natural manner, we have to take the case in a little different form. Suppose twenty men working one day can make a ton of wheat and thirty men a ton of iron; with free trade, ten men have leisure,—ten men are unemployed on wheat. Will they not be sure to be trying experiments on the iron which they want? Will they not slowly but surely learn the

trade? But, if the whole thirty men are forced by protection into making iron without ever serving an apprenticeship at it, are they as likely to achieve success?

Let me suppose another extreme case: I am a farmer in St. Lawrence County, N. Y., understanding my business; and with one day's labor I can produce a bushel of wheat; in three days' time I, not having learned the trade well, can cobble together a pair of shoes with great waste of leather. On the other side of the river is a poor, ignorant cobbler sent out from England and placed upon a Canada farm; he can make my shoes in a day, but he requires three days to make a bushel of wheat wherewith to feed his family. Shall I not be protected against pauper labor? If I allow his shoes to cross the river, shall I not be reduced to his level? Shall I ever learn shoemaking and become independent of these foreigners who flood us with their shoes, unless Government compels me to employ three days of hard work on shoes, instead of two days of leisure in cutting up leather and trying to learn at my ease?

But suppose this cobbler moves one mile and comes into the United States, in what respect has his labor changed in its relation to mine? As a consumer, he now pays a small portion of the United States taxes, which he must add to the price of the shoes he makes, in precisely the same manner as a moderate revenue duty would have been added to the price of the shoes if he had continued to make them in Canada; but do I any longer demand such a tax upon the shoes made by him as shall force me to make them myself? Far from it, I scout the idea of a heavy tax on shoes, and hasten to avail myself of the benefit of his cheap labor; yet in England or in Canada he was a pauper, or so near it as to be called so.

To be consistent in the doctrine of protection to American labor, we should impose the very highest rate of duty in our schedule upon the laborer, and not upon his product; we ought not to permit this flood of immigration; these immigrants can make a great many things which we can make ourselves. Let this duty by all means be *ad valorem* and on a home valuation, so that we may as far as possible exclude the most skillful and intelligent workmen; we don't want the result of their skill when it is exerted abroad, and we shall never prosper if they come here and prevent our attaining it ourselves.

There is danger in the abundance of things. We are flooded with foreign commodities—flooded with comforts and luxuries. Protect us, in order that we may labor: it is a privilege to labor; we want to work harder, to get what we consume, than our natural condition requires. Create an artificial scarcity, so that we may enjoy our full right to labor.

Is it the right to labor for which we should so strive? Is labor the end? Is it not rather what labor will give us that we seek? And if we can get what we want with little labor, instead of much, do we regret it?

"But," says the protectionist, "you will never establish manufactures unless they are protected in their infancy." I believe all baby-jumpers and other devices to aid or protect children in their efforts to walk have been discarded, as it has been found better that they should now and then have a tumble, and possibly one occasionally break its neck, rather than that all should grow up with weak legs, even though their legs should get as strong as they ever would have been by the time the children have become old men. And I believe the same process is healthy for infant manufactures as well as for infant children. The most firmly established manufactures in the United States are those which have never been protected to any extent—such as the various manufactures of wood; of boots and shoes; of heavy machinery, such as locomotives; and, above all, of agricultural implements and tools, of clothing, of sewing machines, and so on, to the extent of the larger part of our home manufactures, some of which have grown up in spite of heavy duties on the raw materials of which they are composed. It may here be well to consider the meaning of the terms "raw materials" and "manufacturing."

In the common use of the words, raw materials are things which are produced mainly by hand or manual labor, and are therefore true *manu*-factures; but which are changed into finished commodities, not by the hand, but really by machines. We are led to much confusion of ideas by this inaccurate use of words.

We call cotton a raw material, yet to the planter it is a finished commodity, produced by the hand labor of the cultivator of the field, and finished upon the cotton gin.

To the so-called manufacturer, the cotton comes from the gin as a raw material, and in the mill it becomes finished product, as cloth.

But, as cloth, it now goes to a real *manu*-facturer, the sempstress, to whom the cloth is raw material, and who by hand cuts it and makes it into garments; and the garment is now a finished commodity.

But, as a garment, it now goes to the farmer, to whom again it is a raw material, by means of which he is enabled to live in comfort, and without which he could not cultivate his farm. It does not cease to be a raw material and become a *finis*-hed commodity until it is worn out; and even then it becomes the raw material of the paper-maker, and may not reach its final end until it has printed upon it an essay "upon the Collection of Revenue," and is put away upon a library shelf.

In its course, whom shall we protect or give a bounty to?

The manufacturer of the raw cotton?

The manufacturer of the cloth?

The manufacturer of the garment?

The consumer of the garment?

The paper maker? or, finally—

To the writer of an essay "upon the Collection of Revenue,"

who may, at this present moment, really need *personal protection* more than any other?

Shall we not rather seek to collect our revenue as impartially as possible, creating no artificial obstacles to commerce, and leaving each individual to work out his own material salvation, even as he works out his spiritual salvation?

This claim for the protection of infant manufactures never ceases. Under its operation they never seem to grow to manhood, but the larger they grow the more urgent the demand for artificial support. The most urgent and imperative demand for protection now comes from the iron-masters and the wool-growers.

American iron was born into the world more than a hundred years ago, when Pennsylvania was a colony. Great Britain was the mid-wife who presided at the birth, and endeavored to strangle the infant in its cradle; but he, being of a tough and fibrous quality, lived and grew apace, until now he could stand alone, if he would only think so. But having been propped up with baby-jumpers and crutches, shoulder-braces, etc., he fears to stand lest he should fall, and demands now to be encompassed with a high wall over which no rude shove shall reach him.

Were the demands of Pennsylvania ever more imperative? Yet what are the facts?

In the fiscal year ending June 30, 1866, a year of very large importations, the total import of iron and steel, and the manufactures thereof, was a trifle over

19,000,000

The export of iron and steel, and the manufactures thereof, allowing two-thirds the value of the agricultural implements and printing presses to have been iron and steel, was about

5,000,000

Leaving a net import of

14,000,000

During the same period, the internal revenue derived from iron and steel of home manufacture, in the forms which are specifically named by law, amounted to \$13,728,133.

The internal taxes alone upon this *infant* home manufacture were nearly equal to the total value of the importation.

It is somewhat difficult to capitalize this tax, as the taxes upon iron and steel were duplicated, and even in some cases quadrupled, but the total value on which this tax was assessed cannot have been less than \$200,000,000, and was probably nearer \$300,000,000. The object in demanding a heavy duty on iron and steel, or any other commodity, can only be to maintain the price in an amount equal to the duty imposed. The demand of Pennsylvania is that the duties shall be raised to a still higher point than they now are, in order to shut out the flood of \$14,000,000 worth of foreign iron, by granting a bounty on over \$200,000,000 of home production. We may well ask Pennsylvania how much longer she will "plead baby?"

I shall perhaps be charged with ingratitude by some of my friends in Pennsylvania, and I might have felt obliged to take another illustration rather than iron, had it not been for the most unreasonable demand of Pennsylvania for a duty on bituminous coal. If not infants in iron manufacture, the men who advocate this duty are infants in intelligence. Suppose New England being without coal, and being obliged to use costly fuel, were to demand that a tax be imposed upon every steam engine used out of New England, and that her own should be exempt; would there not be an outcry which would overwhelm us with scorn and derision? Should we not be charged with the most selfish designs? Yet such a claim would be far more reasonable than that of Pennsylvania for a duty on coal, which is only a tax on the steam engines of New England, already working at a disadvantage. The impudence of this claim is only exceeded by the ignorance of all economic law exhibited by those who propose it, which ignorance is their only justification.

It is alleged that because we have begun the manufacture of Bessemer steel rails in this country, the price has been reduced by the English manufacturers from \$150 to \$110 per ton, or about in that proportion; but those who make this absurd allegation make no note of the enormous extension and improvement in this manufacture in England. If their allegation is true, the trade in steel rails in England would be conducted in the following manner. Suppose the parties to be the English manufacturer, the agent of the Pennsylvania Central Railroad, and an agent of the Pacha of Egypt.

Penn. agent.—What is the price of steel rails?

Manufacturer.—For what railroad?

Penn. agent.—For the Pennsylvania Central.

Manufacturer.—The price is \$110 per ton, delivered.

Agent of the Pacha.—I want an equal quantity at same price.

Manufacturer.—Our price for Egypt is \$150.

Agent of the Pacha.—Have you two prices?

Manufacturer.—Yes, sir; they are endeavoring to establish the manufacture of steel rails in Pennsylvania, and all the English manufacturers have combined to break them down; we charge \$110 to Yankees, and \$150 to all others.

Agent of Pacha.—But you make a profit at \$110.

Manufacturer.—Oh, yes, certainly: we don't make a practice of selling at less than cost.

Agent of Pacha.—Good morning, sir; I will get my rails in Prussia, or wait until the Americans get started. If you make a profit at \$110 and charge me \$150, Pennsylvania will soon supply me at less than \$150, even if you supply her own railroads at \$110.

I believe that any business man must see that the alleged effect of the few small steel-rail establishments in this country is as nothing compared to the effect of the competition in England.

We cannot cripple our whole railroad system, cause all our transportation to be more costly, and retard the development of our western country, by granting any higher bounties to a few rail-makers than we now pay. Yet I do not ask Pennsylvania to cease at once to demand duties upon iron and steel, nor would I willingly submit at once to a great reduction in the duties upon cotton manufactures. Any such abrupt changes would destroy capital and reduce production.

Our problem is to maintain capital and increase production, and this can only be done by a judicious reduction or abatement of internal taxes, and then by a gradual reduction of duties; and I for one have always advocated the entire abatement, first and before all others, of the internal taxes upon metals and the manufactures of metals. The metals are at the foundation of all other industry, and any tax upon them is an impediment to the production of almost every commodity needed by men. It is to be hoped that, whatever Congress may fail to do in the matter of amending our present onerous tax laws, they will not fail to abate all internal taxes upon metals, and the manufactures of metals, and to refuse all requests for an advance in the duties.

The repeal of the cotton tax should immediately follow, if it should not precede. This tax was never justifiable, except as a temporary expedient; the least onerous method would have been to have collected it of the manufacturers for the home consumption, and of the merchants at the port of export. To attempt to collect of the producers checks the change from the plantation to the small farm system, and checks production. It may be added that the time is not far off, but will come probably within two or three years, when there will be a surplus of cotton in the world.

I think Boston to-day affords a good illustration of the evils of protection. The conditions of soil, climate and coast, indicated maritime pursuits as the province of New England men; and she engaged in them chiefly until the South forced a protective tariff upon the country. As this destroyed commerce, New England developed textile manufactures before their time, and then, becoming converted to the doctrine of protection, continued to foster them by the same process. The result is, that a large amount of the capital, and a large amount of the business capacity of Boston which should have been applied to railroads, steamships and commerce has gone into manufactures; consequently, Boston commerce declines, and young men emigrate. Commerce would have employed the young men at home, or in voyages ending at home; but textile manufactures employ only a few treasurers, agents or commission merchants, and a very large force of operatives or laborers. There are too many young men for the number of places equal to their capacity, and they must migrate. I think the population of New England has not been improved by this forced establishment of textile manufactures.

If, as I have attempted to demonstrate, a tariff is but a tax un-

der another name, then it is a burden upon the labor of the country, and is subject to precisely the same law as an internal tax.

I now come to another point to which I have adverted, viz., that, in the collection of a given amount of revenue, more or less evil could be done, according to the wisdom or unwisdom of the law. Nations which are older than ourselves in the matter of taxes, select certain articles to bear the heavier portion of the burden, rather than lay an even portion on all. It is an axiom, that the consumers pay all taxes in the long run; but this should always be qualified by adding, that their consumption of taxed commodities is regulated by their production. The great body of consumers and the great body of producers are identical, and they procure the taxed articles which they consume in exchange for the articles they produce.

The articles thus selected for taxation are tea, coffee, sugar, spices, spirits, tobacco and other commodities, the consumption of which is voluntary, and the deprivation of which does not impede production. None of the articles named are essential to production, in the sense that meat, bread, iron and clothing are essential; and therefore the consumer may use a little more or less, according to the price, and still cultivate as many acres or operate as much machinery. England keeps up her custom-houses because tea, coffee, sugar and spirits are natural subjects of taxation; but, if they were all produced in England, she would tax them by an excise duty at the same rate, and abolish her custom-houses.

But now let us see if we really limit the power of the consumer to purchase tea and coffee, by a high duty on them, and no duty on iron, rather than by a moderate duty on each. Let us return to the Pennsylvanian and the Englishman, and remember the relative condition of labor on iron and wheat.

Let us suppose that each was employed the whole year, save thirty days, in feeding and clothing his family, and has just thirty days to give to accumulating a surplus of capital. The Englishman, for some reason, desires to have, as the representative of his surplus labor amounting to thirty days, a ton of wheat, which he can make in thirty days; but he can make a ton of iron in twenty. The Pennsylvanian must have a ton of iron, which he can make in thirty days, but he can make a ton of wheat in twenty. By free exchange, each can satisfy his desire with twenty days' labor, and each will thus have ten days to spare.

Wanting tea, each will work upon some commodity to exchange for tea. We will say that the Pennsylvanian wants five pounds of tea and with five days' work can get it free of duty; the Government puts a duty on tea equal to five days more, but the Pennsylvanian still has five days to spare, and works it out. He has his ton of wheat, his five pounds of tea, and has paid five days work, or five dollars to the Government. But under a system of protection to iron, by which the Pennsylvanian has been caused to give thirty days to iron, he has only the iron; he has no tea; the Government has no revenue, and must now take a part of his ton of iron.

Free exchange of the results of labor, free trade, free commerce, gives to each nation the advantage of the different gifts of soil and climate which God has bestowed upon the several sections of the earth. It increases the abundance of the things which give comfort or enjoyment to all people. It does not degrade the labor, or reduce the purchasing power of the wages in the most favored country, like our own; but, while it would yield to us more comfort and more luxury, it would elevate the oppressed of other nations and civilize the barbarian.

The individual laborer, who is skillful in farming, or well placed on good land, and whose wages are high because his product is large, does not give up his occupation and go to making shoes because some poor shoemaker near him is starving and willing to work cheap; then why should Uncle Sam, with his rich farm, and his immense domain, scarce touched by the hand of man, refuse to employ the pauper labor of Europe, of which we hear so much, because the paupers work cheap?

Much of this hue and cry about pauper labor is mere clap-trap, the pauper labor of England is mainly in the agricultural counties. Of the same nature is the common talk about the flood of foreign commodities with which we are overwhelmed. Let any one analyze the imports of the year 1866, and out of \$368,000,000 on which duties were paid, he will find less than \$68,000,000 consisted of articles of luxury, and over \$300,000,000 were articles of comfort or of necessity. It is alleged that the total value of all our products in the year 1866 was \$6,000,000,000; and it is tolerably well ascertained that the value of our products in 1860 was \$4,000,000,000, on a gold basis. If the estimate for 1866 is correct, then our flood of foreign luxuries was equal to about one per cent on our production!

Upon the third premise, which seems to me fundamental, viz., that gold and silver, either in the form of bullion or money, are only useful up to a certain amount, which will define itself, if left to natural laws, I shall spend but a moment.

Gold and silver, or specie money, has been adopted by the world as the measure of value of all commodities, and, being an article of universal desire, it has value in relation to other commodities in the proportion which the labor required to mine, smelt and refine the specie bears to the labor required to produce the other commodities. Now if the exchange of all other products of labor be left free, except so far as the need of revenue causes a tax to be imposed upon the so-called natural subjects of taxation, then the exchange of specie as one of the products of labor must be left free also, and it will follow the natural law, remaining where it is wanted most. The country which continues to use it as a measure of value will want it more than the country which has substituted paper as a measure, or wampum or cowrie shells, or any other substitute which ignorance or necessity may devise, and the country which wants it will get it because it will give more of

other products of labor for it, unless those products are prevented from entering the country which has the gold. If importations are prohibited or retarded, then gold remains in the country unnaturally, and causes an advance in prices the same as an issue of paper money. If we could prohibit imports absolutely, and continue to mine \$100,000,000 of specie a year, its value in this country in relation to other commodities, would, of course, be far less. This was done in Japan. Japan produces gold, but, by non-intercourse, it had so accumulated it as to cause it to lose a part of its purchasing power, or relation to other products; and the first outside barbarians who opened trade with Japan, obtained much more gold for their commodities than they could have got elsewhere.

We can make the same position in the world as Japan, if we inflate our currency and prohibit imports; but our gold will then have no value except in the arts, as paper can be made with less labor than gold can be mined.

Taxation of any kind is surely a burden, but it has its compensation. The desire to live as comfortably, or, in other words, the desire to produce as much for one's own use, despite all taxes, stimulates invention; and every invention, by increasing the productive force of the laborer, increases the result. The invention of improved agricultural machinery kept our crops increasing all through the war, and I suppose we can now produce as much more than we formerly could as would suffice to pay all the taxes without using any more effort or expending any more hours of labor in the aggregate; but the trouble is, the increase is not equitably divided, and cannot be under our present system of currency; therefore the burden presses more and more upon the mass of the people, and will continue to do so until the proper correctives are applied.

Now as to the correctives. The first essential thing to be observed, is not to make any rapid change. Because it would have been better to have collected the revenue from what I have called the natural subjects of taxation at the beginning and up to the present time, it by no means follows that we should jump to that system at one bound.

Our industry has been diverted from its natural channels by protection, and we must slowly and cautiously guide it back, else we may all be paralyzed. We need the immediate establishment of a permanent board of Commissioners of Revenue, consisting of at least five competent men, secure in their tenure of office, well paid, and selected because of their fitness and ability. Mr. Wells alone, with work piled upon him which five men could not have accomplished in the very best manner in the time given, has yet made a report of inestimable value, and such as was never presented to the country before.

A permanent board, known to have the matter of revenue in charge, would take it mainly out of party politics. The people could not afford to have it trifled with. The board of Commis-

sioners would prepare changes and give fair warning, thus giving each branch of industry time to prepare, and preventing disaster.

Slowly, but surely and safely, can this country be brought to a system by which it shall secure an ample revenue from almost as few articles or interests as are now taxed in Great Britain. If any one doubts this, let him consider. We have now, as I suppose, a larger population, and though not as much accumulated capital, yet, what is more valuable, a better educated people, and a country whose resources have hardly been touched, and whose productive capacity may be indefinitely increased. Can any one doubt that a given number of hours of American labor will yield a larger result than a given number of hours of English labor? Aggregate all the American laborers into one, and all the English laborers into one. Put the Yankee education and the Yankee versatility, and the innumerable labor-saving devices of the Yankees, and also the varieties of our soil and climate, against the great works and mills, and greater accumulated capital of the Englishman, and which would get the greatest result for his labor? I think every one here will answer, The Yankee.

Then he will consume more tea and coffee and sugar and spirits and spices, and have a greater income, and require more stamps to represent more transactions, than the Englishman; and, consequently, the same rates of tax upon the various items will pay our larger rate of interest, but our less cost of army and navy and civil services, and pay our debt besides as rapidly as it should be paid. We are paying debt too fast now. The faster we try to pay at the beginning, the longer we shall be in paying the whole.

To be Continued.

ART. IV.—RECOLLECTIONS OF MEXICO; OR, ROAD AND MOUNTAIN.

(Continued from last number.)

CHAPTER III.

THE party numbered twelve in all—namely, Colonel White, Captain Lewis, Lieutenant Waters, Don Manuel, the Doctor, Antonio the guide, Thomaso his son, and the writer, including four rangers—two to take charge of the mules at the point we should leave them, and two to accompany us to the summit, should we be so fortunate as to accomplish the ascent.

The direction of affairs being now given to the guide, we left the more open timber through which we had been riding and entered a dense forest of pines, into which the party plunged with all the ardor which novelty and risk tends to impart. For some time we held our way upward, but soon discovered, to our surprise, that a deep valley lay between us and the mountain proper.

Never pausing, down the party dashed, the guide now leading them by the most intricate paths, upward again on the other side, still through the pines, till an opening in the trees at last told us we were approaching the limit of the timber in this direction, though not its uppermost limit.

Our view hitherto obstructed by the trees, we had no idea of the altitude gained until arriving at their edge, when we were agreeably surprised to find ourselves already nearly half way up the mountain. It is true that in the half that was before us lay all our difficulties; still, a long distance had been gone over in a comparatively short space of time, leaving the hour still early.

Now, for the first time, I had full view of the southern side of the mountain, which presented a very different aspect from the solid, unbroken wall of snow that met our gaze from the door of the ranch the morning before. The smooth snowy mantle that covered the shoulders of the giant, as he stood with his back to the north, presented a threadbare and tattered appearance towards the south, while in many places vast rents displayed the rugged outlines of the naked limbs beneath, plainly indicating the scantiness of the covering, owing to the influence of the solar rays. On this side also vast seams scarred the mountain from point to base; indeed, the "baranca," down which the ranger and mule had fallen, was a continuation of one of those rents. At first I supposed these seams all marked the course of former streams of lava: in this I was mistaken, for, on further examination, I found that more than one penetrated the mountain to a depth the eye could not follow, and the torn and shattered appearance of the rocks, showed that the huge mountain had been rent to its very centre by internal convulsion.

On clearing the wood, we halted to rest the mules, which were pretty well blown, not having drawn rein since starting.

The spot where we halted afforded a fine view of the valley, which, judging by objects below, could not have been far short of five thousand feet beneath us. The blue smoke ascending in an unbroken column into the still air, marked the location of the ranch of the old Spaniard, embosomed among the trees. But not until aided by the glass did I perceive the rangers watering their horses in a stream that ran out into the valley like a silvery thread; and far away on its banks, I could barely make out a party of horsemen which had stopped to rest under the shade of an immense isolated tree. The appearance of lights and shadows on the deep glens and irregular configuration of the mountain sides, was novel and interesting; and the inverted appearance of objects, from being placed almost directly over them—the tops of the trees and rocks first striking the eye—produced a most singular effect. The scene was both grand and pleasing, giving us a foretaste of what we might expect from the summit.

Having refreshed ourselves by the cool waters of a small cascade which was commencing—for the hour was still early—to pour

down from the snow above, we again took to our mules. The pace was now slow and labored, running along the skirts of the pine wood, the rugged sides of the mountain affording no surer footing than the naked rock; and it was becoming evident that, to avoid accident, we must soon abandon the sure-footed animals which had done us such good service.

It was interesting to mark the gradual diminution of vegetation as we ascended; the forest of tall trees under whose branches we passed but a short time before, had gradually dwindled to a few scattered dwarfs, no taller than the mules on which we rode, and the lesser vegetable productions in corresponding proportion; grass and moss, particularly the latter, still seemed to retain their vigor, but even these, too, were now beginning to display symptoms of decline. On inquiring how much farther Antonio intended taking the mules, he pointed to an abutting shoulder of the mountain, the top of which appeared to be level, intimating he should leave them at that point. The approach to this place was much more difficult than we had yet encountered, and we finally had to abandon the mules and leave them to pick their own way, which they did with a sagacity truly astonishing. Now they would stop as if to gather themselves up for a rush up some part steeper than common; then they would bend their haunches, throw out their fore-legs and allow themselves to slide down ledges of rock which could be overcome in no other way; or they might be seen bending their bodies, to maintain their equilibrium, in a manner that would convince the most sceptical of the high order of their sagacity. Indeed, the mule, in the hands of the Spaniard or his descendants, is found in a higher state of perfection than he is in the possession of any other people; and it has often been facetiously remarked that if he could be made to talk, Spanish would be his language. When operating in large droves, he is generally led by and evinces great partiality for a white horse or mare, and at night he will often fight for the nearest position to his leader. In fact, a volume could be filled with the marvellous stories related of his sagacity, affection, endurance and deeds in Spanish America.

We found the place Antonio selected to leave the mules well adapted for the purpose, being comparatively level and having a scant supply of grass. Leaving them in charge of a couple of men, we continued our way along this projection about three hundred yards, until stopped by the abrupt inclination of the ascent, which here shot upward nearly a thousand feet, at an angle which precluded the possibility of surmounting it.

Here Antonio was master of the occasion. Turning short off to the right, the guide wound round innumerable crags and projections, until we discovered a ravine which cut through the acclivity in a manner that afforded us a chance of climbing it, by bringing into play nearly all the members of the body. We lost no time in commencing our first lesson, and had succeeded in overcoming

some four hundred feet, when another accident caused us a short delay and the loss of the services of one of the men. While scrambling up one of the steepest places, a small stone was detached by some one of the party, which went bounding down the steep, striking the unlucky ranger—for it was the same who had tumbled down the "baranca"—on the cap of the knee, causing him to yell out with the acuteness of the pain. He was admonished to keep well up with the party, but from laziness or inability, was unable to do so. The Doctor fortunately found no bones broken, the knee being simply garnished with a lump, the dimensions of which the Doctor comprehensively described as being about the size of a "piece of chalk." It was sufficient, however, to put a period to the ranger's ambition to scale mountains. Here we lost another of our party in the person of Colonel White, who expressed his inability to proceed further; indeed, he had been complaining the night before, and on the following morning did not look in a condition to encounter the hardships of the day; but all that could be said would not induce him to remain behind. Leaving them to join the men in charge of the mules, we continued our way, step by step, up the steep, gaining the top with infinite labor and no little risk. Halting to recover breath, we naturally turned our gaze down the steep sides which we had overcome. The Colonel and the ranger had dwindled away in proportions exceeding small, as they clambered over the rocks to rejoin the equally diminished party in charge of the mules. The range of vision, too, was sensibly increased over the surrounding country. This was a good beginning, and I had the satisfaction of learning from Antonio that there was but one more place equally as dangerous to surmount. Supposing it to be within the region of the snows near the summit, I questioned him on the subject, and learned that the place alluded to was not far from where we stood, and was designated by the fearful name of "Gulfo Infernio." He also informed me the snow lay heavier on the mountain in some years than it did in others; and appearances indicated that there was less, or at least, no more snow this year than the last time he visited the summit; if so, the difficulties would not be at all insurmountable.

A little solitary tuft of delicate grass peeping up from a crevice in the rock on which I sat, here reminded me of that which I had almost forgotten in the excitement of the moment. This was to take the altitude of the line which limits the growth of vegetation. Indeed, according to general appearances, we were far above this limit, and I should have determined its altitude at a much lower degree had not the sight of the little tuft proved we were not yet beyond it. Accordingly, I unstrapped the barometer from the shoulders of Antonio. It marked 18.50 inches, indicating an altitude of thirteen thousand four hundred and twenty-three feet. This elevation marks the limit of vegetation in this latitude, and it may be said, for all latitudes within the torrid zone.

Slowly winding our way upwards, we gradually got involved in a broad sheet of sand and ashes, which lay between us and the snow. Though not by any means as steep, it was far more fatiguing than the acclivity where the ranger met his mishap. Sinking beyond the ankles at every step, our progress was consequently slow and, I may add, painful; and it was with satisfaction as well as surprise we found ourselves, though still within the limits of this zone of ashes, entering on a broad space several hundred yards in diameter, which was entirely free from it. The inclination of the mountain having here too sharp an angle, the consequence was an "avalanche" of ashes, or sand slide, took place the year before, which Antonio happened to be a witness of, sweeping all before it, laying bare the black volcanic rock and lodging a thousand feet below, where it lay piled up in an immense mass.

Glad to have the feet free once more, we moved forward with increased speed, our course being more round the cone, toward the eastward, than directly upward, until we found ourselves within a labyrinth of detached rocks and pumice stone imbedded in ashes, showered down from the heights above with certainly no sparing hand. They were of all sizes and, I might add, shapes, for some of them presented the appearance of houses, having windows and doors, and the guide led us to one which required but a few touches of the chisel to render it into the shape of a perfect cow.

Between, around and over these singular rocks we scrambled, aided by the instincts of Antonio, which never seemed to fail. At last a vacant space before us gave evidence that the rocky labyrinth approached its end. This vacant space, or hollow, was, as near as I could judge, about sixty yards wide, snow lying on the opposite side; of its depth we as yet had no knowledge. Antonio, who was some distance in advance, beckoned me to approach. He was seated cross-leg on a ledge of rock which formed a kind of parapet on the edge of the hollow. As I made a movement to get beside him, he motioned me back with his hand, saying at the same time, "Stay, stay, señor; do not come up here; put your head over and look." Obeying his instructions, I leaned over the rock and looked below. Never before did a sight present itself calculated to try the nerves more than did the awful gulf down which I now gazed; and it was fortunate that the guide had warned me back in time, for had I jumped on the parapet as I had intended, I verily believe I should have fallen into its horrible jaws. Its black sides ran sheer down from where Antonio coolly sat to a depth almost impenetrable from the inability of light to follow. Vast masses of rocks rent and torn, of which the gloom below allowed an imperfect view, appeared piled upon each other, or were scattered about in chaotic confusion, indicating the terrible character of the convulsion which rent the mighty mountain in twain.

This was the "Gulf Inferno" of which Antonio had spoken; and certainly its appearance did not belie its nomenclature. The

ardor of the party seemed considerably cooled when the guide informed them that our route lay down in the very depths of this uninviting cavity. Little time, however, was allowed for consideration, for he again dived in among the detached rocks, taking a course which seemed to run parallel to the chasm. Through a narrow opening in the rocks he pushed his way—so narrow, indeed, that the largest of the party had to squeeze himself through with considerable difficulty. On the other side of this opening appeared a very steep declivity, down which he plunged with astonishing speed, leaving us far in the rear; we were, however, not long in coming up with him, for the rocks formed a kind of natural steps, which made the descent comparatively easy—at least part of the way; but the difficulties soon began to increase as well as the gloom, until we were obliged to use the utmost caution to avoid accident, proving Antonio's account of its dangerous character. We had no doubt it led to the "Gulfo Infernio." Nor were we mistaken, for, after a tedious and perilous descent, in which our shoes and garments suffered not a little, we found ourselves between the narrow perpendicular walls which enclosed this fearful place. Calculating the time we took to descend, and our observations from above as well as below, the chasm could not be less than six or seven hundred feet in depth. It was about forty yards broad at the bottom; the top, as we look upward, did not appear more than ten, though in reality it was fully fifty yards wide, while through the apparently narrow opening the stars presented themselves to the astonished gaze of some of the party. The dim twilight that prevailed rendered necessary extreme caution in making our way over the shattered rocks and rents, one of which was so wide it required considerable effort in making the jump to cross it. This rent, Antonio informed us, ran along the whole extent of the chasm, and in some places opened out to a width of some thirty feet. Of its depth he only could conjecture, having on a former occasion rolled a large rock over the edge at its widest part, and never heard it strike below. The fearful depth it must have gone to carry it out of ear-shot, in a place the silence of which was painful, went far to prove that the mountain having been rent to its very centre was no figurative expression; indeed, the strong sulphurous odor that saluted us on placing our heads over this sub-chasm, left no doubt on our minds of the fact. Seeing the guide frequently stop, pick up pieces of rock and carefully examine them as well as the dim light permitted, I naturally inquired his object. He unhesitatingly informed me that on each of three visits which he paid to this place, his companions found what they had first supposed to be crystallized quartz, but which afterwards proved to be actual diamonds, one of which, he said, a cousin of his sold in Puebla for the sum of five hundred dollars. This was news that, under any other circumstances, or in any other place, would cause us to pause and look sharply about us; as it was, however, I do not believe that all the precious stones

ever contained in the famous "Valley of Diamonds" mentioned by that daring traveler, "Sinbad the Sailor," would have tempted many of the party to remain five minutes longer than was necessary to take them out of the infernal gulf.

I could not help thinking that had this spot been situated within the limits of the United States, neither its fearful name nor the dangerous character of its approach would save it from having every rock and stone upturned in testing its qualifications as a receptacle for diamonds.

I record this account as I received it from Antonio, neither vouching for its correctness nor condemning it as false.

Having succeeded in crossing to the other side of the bottom of the chasm, we followed it up some distance, until coming to what might be called, with a slight effort of the imagination, a "stairs." Bearing no resemblance to the passage by which we descended, it consisted of a succession of galleries abutting from the wall of rock. There were no narrow ledges a few inches in width, with a yawning gulf below, which daring travellers are made to pass by equally daring "story-tellers." On the contrary, the galleries were broad and safe, rendering ascent easy, if the fatigues of the day had not begun to tell upon us all, with, perhaps, the exception of Antonio and the Doctor. As to the latter, he did not belie his training. Those sinews, which the "Reeks of the McGillicuddy" had in early life developed, were fairly tried and not found wanting. Ever foremost, ever ready to assist his companions; he excited the admiration of all, not excepting Don Manuel, whom he also mystified.

With worn and jaded limbs, we threw ourselves on the snow, encountered for the first time, after having climbed out of the dark abyss, a second visit to which we hoped might be spared us. This, Antonio informed us, could not be, for our backward course lay over the same route.

For the first time since starting, we partook of a stimulant, each man drinking a wine glassfull of raw brandy, of which we had a limited supply, intending to use it medicinally only. It was curious to observe the effect it had upon the differently organized physique of the party. Upon the older and, it may be said, more seasoned, it was not outwardly visible to any great degree; but on the younger its effects were marked. Thomaso and the young ranger, who were lying on the snow in a state of utter exhaustion, soon began to show signs of recuperation. The dark eye of the young Mexican began to kindle and light up, strongly contrasting with the dull and leaden appearance it presented a moment before; the ranger being similarly affected. In a few moments they started up and commenced snow-balling each other, and finally set off across the great snow field or "glacier," leaving the remainder of the party still lying on the snow. The general effect, however, upon us all was beneficial.

Resuming our way, invigorated not only by the stimulant, but by the close proximity of the summit, which could not now be more than two thousand feet above us, we followed the footsteps of Thomaso and the ranger across a broad inclined plain of snow, whose smooth and even surface felt more grateful to the feet, after the rugged and broken rocks over which we had been travelling. But this was counterbalanced in the painful effect on our eyes, from the glare of the sun upon the snow, which at first deprived us of all sight; by degrees, however, it returned, but not in a perfect or healthy degree while we remained on the snow.

Continuing our way over the plain, we came to a ravine, into which we descended without pausing, the sides not being very steep or its depth very great. Travelling up its channel a short distance, Antonio led us out on an eminence, where he pointed out the course of the ravine running upward the whole length of the way to the summit, passing into the "crater" through a gap plainly visible. It was very evident that it had been the channel of a stream of lava at some remote period. The remainder of our route lay in its bed, which was partly free from snow, and presented no serious obstacles to our progress; indeed, extreme fatigue might be said to characterize our last struggle. The effect of the rarity of the atmosphere on the lungs in climbing was the greatest obstacle we had to contend with; so painfully oppressive did it become as we approached the crater, we could not climb ten steps without stopping to recover breath. A few snow banks, it is true, we encountered which obliged us to use ropes to surmount, but they were neither formidable nor particularly dangerous. At last, weary and exhausted, we entered the gap, which, to our surprise, was of great breadth and depth, being deceived by the diminutive appearance it presented from below.

For a long time we lay upon the snow panting for breath, utterly indifferent to those objects which it had cost us so much to behold, until the Doctor thought it necessary to administer another modicum of brandy, which was not without its effect. Nevertheless, it was some time before we stirred from the spot. Though we were under a vertical sun, and in the hottest portion of the day, the air was cold, almost frosty, although the temperature, as indicated by the thermometer, was not down to that point. Following the course of the gap a short distance, the jaws of the great crater began to open up as we gradually approached. It is impossible, owing to the deceptiveness as to the distance of objects in high altitudes, to give any other than an approximation of the dimensions of this great cavity, unless actually measured, which would occupy more time than any human being would be willing or able to bestow at such an elevation. It is circular, or nearly so, in form, viewed from the point where we stood, but from the highest point of the peak it presented a more angular appearance. Its general form may be set down as that of an in-

verted cone whose vertex is not in the perpendicular drawn from the centre of its base; or, in plain English, its shape is that of a bowl, the deepest part of which is not in the centre of its bottom, but rather on one side.

It is somewhat singular that no two accounts hitherto given of this great cavity quite agree. In some particulars this may be accounted for in the diversity of opinion between individuals when judging of undefined objects.

Its diameter I estimated at half a mile, but Don Manuel and Antonio gave it a greater width. Its depth varied from five hundred to a thousand feet. On the spot where we stood, overlooking the great cavity, the side ran irregularly, sloping down to nearly the latter depth; we were consequently standing over one of its deepest parts, and, as far as I could discover, the only part, with one exception, that showed any symptoms of the vitality of internal fire. According to Antonio's account, it was in an unusual state of repose, he having seen ashes ejected from as many as five or six openings. From a black looking opening below, issued a small volume of light-colored, sulphurous smoke, ascending in an unbroken but almost imperceptible column till it reached the gap, through which it passed, impregnating the air with its unpleasant odor. Through this gap, it was evident, flowed the lava of remote eruption, until a subsequent and more terrible one caused the other side to give way, forming now the lowest gap or "lip" through which the last stream of lava has flown. The bottom of the crater in many places bore a striking resemblance to the Golfo Inferno, except that the sunlight showed more clearly the condition of the former. Here Mother Nature had displayed one of her most awful but eccentric moods; the shattered and torn rocks displayed the same chaotic characteristics, piled and poised upon each other in wild and most fantastical confusion, while other parts of the volcanic crust presented as even and compact a floor as if it had never been disturbed.

Dreary and desolate, in the stillness of death, is now this huge giant of Creation; his great mouth still gaping, but his once fiery throat, choked with its own vomit, emits no sound, not even a groan to break the solemn stillness that reigns above the clouds. Silent now is that mighty voice that once made itself heard from sea to sea, as it hurled the awful fiery discharges that struck with fear the strange and remote people who dwelt at his feet. Still and stiffened, rent and torn, is now the huge frame once so active in convulsions that shook a continent. Hoary and cold is now that venerable head covered with the snows of a thousand generations, which was wont to lave in liquid fire—in the hearts-blood of a "sphere," poured out from a wound of its own creation.

Naught now appeared but the semblance of impotency, decay and age. Veritably, 'tis of the past, "The Old Volcano."

I could not determine whether the yellowish tinge imparted to

many spots of its lowest depths was the effect of the sun's rays, or actual deposits of sulphur. There is a story told which is generally credited, that the sulphur with which Cortes made his powder, "he obtained from the crater." This story cannot have any foundation, for many reasons, one of which it will be sufficient to name.

The whole atmospheric column is some forty miles high, yet so confined is the lower stratum of air by the pressure of that which lies above it, that half of the whole column, that is, the lower half, is compressed into a space of less than three miles and a half in height. To nearly this altitude does Popocatepetl raise its head. Therefore, independent of other impediments, no human being could possibly labor with half the usual quantity of air extracted from his lungs.

Cortes, in a letter to Charles the Fifth, mentions having sent ten daring men, under the lead of Diego de Ordez, on an expedition to the top of the mountain, in order to ascertain where the smoke came from. Ordez said he accomplished the feat, and placed a blazing volcano on his coat-of-arms, to prove the fact. He subsequently sent others on a similar errand, in 1522, and one of them, Francisco Montano, said he not only reached the top, but let himself down into the crater, to a depth of some seventy or eighty fathoms. But, where Cortes mentions his having obtained sulphur from it, he does so in a manner that clearly shows he placed no reliance on this source: for, in the same despatch, he requests the Emperor to "still continue sending him his supplies of sulphur as before." Indeed, in another despatch, he states the mountain to be in a state of activity—that an eruption was going on. These statements seem to conflict. He, certainly, could not obtain sulphur from an active or even partially active volcano. It is not surprising that the truthfulness of his dispatches should be questioned, when he describes the Mexicans as being "cannibals," though that statement is more probable, than that man could labor on the crater of Popocatepetl, to produce sulphur in any quantity. I questioned Antonio as to whether he had ever known sulphur to be taken from it. He said he had heard the Indians in the neighborhood of the pass of Ahualco on the north side, had taken small quantities from it some years before, but he laughed at the idea of an Indian or any one else remaining on the mountain long enough to obtain it in any quantity; besides, the Indians had a superstitious dread of ascending the mountain. Indeed, the want of air was so painfully felt by us, that exertion to any extent, was almost impossible, and it took us here quite as long to climb one hundred feet as it did to climb five hundred at the base. Four of the party suffered exceedingly from pains in the lungs, and the ranger and Don Manuel commenced bleeding slightly at the mouth. The doctor, however, succeeded in stopping the flow. The remainder of the party displayed no symptoms, other than extreme fatigue.

The effect of the sulphurous smoke, the entire column of which

seemed to pass through the gap, also added to our discomfiture to such an intolerable degree, that we hastened from it sooner than we had intended. Though we had stood on the brink of the great crater, and had gazed into its yawning depths, we had yet to climb several hundred feet to gain the apex. Slowly chopping our way in the frozen snow with hand axes, we gained a comparatively level spot, under the last elevation between us and the highest peak of the mountain; for nothing short of that elevated point would satisfy the party. It was about one hundred feet high, about fifty feet of which the inclination was such as to enable us to overcome with the aid of our axes, cutting steps as we ascended; each man taking his turn, left us time to recover breath. The remainder of the acclivity ran up at an angle that compelled us to use the rope; the daring Antonio taking one end, with great risk cut his way to the top, where he held it, enabling the more timid to ascend.

Our view which was before obstructed by the boundaries of the gap, was now unlimited, not a cloud being in the heavens.

There is no country in the world affords more frequent opportunities of enjoying expansive prospective scenery than Mexico, and there was not one of the party who was not familiar with such scenes; but the sudden burst of astonishment that broke from them proved how unprepared they were for the boundless and exquisite landscapes that lay spread out before them. Far, far away below, lay cities, towns, villages, farms, plantations, woods and streams, all traced out with a distinctness, variety, and beauty of coloring; stamping them on the memory as vividly, but far more enduringly, than objects are impressed on the plates of the daguerreotypist.

Space presented itself in its most diminished proportions. The valley and town of Ameca, appeared so astonishingly close, that had we not made a rough and toilsome journey of some twenty-five miles from the neighborhood of the latter to where we stood, it would have been difficult to have made us believe that the town was more than five miles off.

The "Pico del Traile" shot upwards from the side of the mountain like a church steeple, while on the opposite side of the mountain, the little town of Chulula, with its huge sacrificial mound, consecrated to countless thousands of human victims, lay below us, as it were at our very feet, though in reality some twenty miles away. The sacrificial mound, itself a hill of very respectable proportions, looked no larger than an ordinary sized dwelling, while the Christian temple that now takes the place of the gory sacrificial stone on the top did not appear larger than a marble. The beautiful and populous city of Puebla, with its countless churches and convents, was clearly but diminutively perceptible to an astonishing degree; and by the long trail of dust which marked the course of the homeward-bound troops I could trace from the very gates of the city the line of road running the whole length of the Valley of Puebla, until it entered the break in the range of mountains which divides it from

that of Mexico, at Rio Frio, a distance of over forty miles. But the distinctness with which we traced out the bold outlines of the volcano of Orazaba, the twin sister of the one on whose apex we stood, and its equal in height save by a few feet, which was nearly one hundred miles distant, betrayed, more than aught else, the astonishing transparency of the atmosphere. The city of Mexico was the only spot in the whole horizontal range of vision which was shut out by a light yellow haze overhanging it. There was a solemnity in our situation that was felt by us all: we seemed, as it were, lifted up high above the world on the top of a vast billow of snow, irresistibly sweeping onward through space. Not a living thing was to be seen around or about us, and the intenseness of the silence had in it something awful. Once, and only once, a living object in mid air presented itself on the lens of my glass. For a moment I kept it there, as it was moving in the same plane and in the same direction in which the glass was pointed. It was a huge bird of prey, having a large dark object in its talons—so large, indeed, that I at first thought there were two birds flying close together. What the object was it carried, or to what species the bird itself belonged, there was no time to determine. In all probability it was an eagle carrying a kid or a lamb to its eyrie in the mountain. It was laboring heavily in the thin air far below, for nothing could be seen in the direction with the naked eye.

Our indulgence of this glorious panorama was of very brief duration; the day was waning fast, and a toilsome and perilous journey lay before us; the air, too, was growing colder, still the thermometer did not mark a very low degree of temperature: 39° as yet marked its lowest point. But we were thinly clad, and there was a current of air beginning to come in from the north laden with an icy chillness that seemed to penetrate our very bones. My object was accomplished, having already noted the height of the mercury in the barometer. It was one of Gay Lussac's portable mountain barometers, and as the circumstances through which it came into my possession are somewhat interesting, I shall briefly narrate them: Some months before, in Vera Cruz, while making purchases in a store, with the proprietor of which I had some slight acquaintance, my attention was attracted to an object in a corner, covered with dust, and singularly out of keeping with the boxes and barrels with which it was surrounded. Upon examination, it proved to be a barometer, done up for transportation. On inquiring of the proprietor whom it belonged to, he said he did not know; that it was sent down from the interior, some three years before, with other baggage, to be sent to England, and that the address was somehow lost or mislaid, the owner, he understood, having died somewhere in the mountains. Being asked if he would dispose of it, he made no objection, stating his charges for transportation, storage, etc., amounting to more than the things were worth. I accordingly purchased it, with the mental reservation to hand it over to the heirs of the de-

ceased, should they be found, which was exceedingly problematical. On examining it, I found engraved on a small brass plate, set in the frame, the name of the owner, W. W. Grant. I felt naturally interested in his fate, and speculated on it with Don Manuel, who happened to be in company with me at the time, and we determined, circumstances permitting, to learn something of it, but hitherto without success.

The morning after our arrival at the Ranch of Pedro Hermandes, I happened to walk by the edge of a little plantation of trees, at the back of the dwelling, when I came upon a solitary grave, surmounted by a wooden cross, upon which was scrawled, in rude characters, scarcely legible, and fast becoming wholly so, the name of William Wallace Grant. This was the grave, beyond a doubt, of the owner of the barometer of which I became possessed. From the Patron I learned the following: He came there to ascend the mountains, accompanied by two servants, Mexicans, and had, with some difficulty, obtained Antonio's consent to accompany him. But on the morning appointed for the ascension he was taken with sudden illness, which in three days carried him off. He informed the Patron that he had been attacked with yellow fever while at Vera Cruz, and that he never felt himself perfectly well after, but supposed the mountain air would gradually restore him; that his English servant had robbed him while he was sick and fled to the United States. He wrote some letters, which he gave the Patron to be mailed, and told the name of the place he was from in Scotland, but the manner in which the good Pedro pronounced it rendered it utterly unintelligible to us. The nearest approach he made to it, according to our interpretation, was Jedborough, or Edinborough, and these were certainly not reliable. After his death, the Patron sent his baggage to Vera Cruz, together with the barometer, the possession of which I obtained in the manner related.

Returning to observe the barometer for the last time, the tripod of which still remained fixed on the snow, I found no variation in the height of the mercurial column. It marked 15.85 inches. At the sea level it had marked 30.00 inches. The thermometer had fallen three degrees, marking 36.00. These figures indicate an altitude of 17,726 feet. I made no calculation for temperature, which, as it happened, would have made very little difference in the altitude, for the following reasons: To be as exact as possible in barometrical measurements, a calculation for temperature is necessary, but the formula contrived does not meet the difficulties of the question. According to the rule laid down, the mean of the temperatures of the two stations is taken, that is, the mean of the temperature on top of the mountain and at the sea level. If that mean be 69.68° Fahrenheit, no correction is necessary; if above that quantity, add 1-480ths to the whole height found for each degree above 69.68 ; if below, subtract the same quantity. Now, the temperature on top of a mountain and at the sea level depends upon the state of the weather, the hour of the day, the quarter from

which the wind may blow, and other causes. For instance, I found on the day of my departure from Vera Cruz the thermometer marked 97.00, but on the day before, a northerner having been blowing, it marked 84.00. This would make a difference in the altitude of several hundred feet. 'Tis true I might have taken the mean of a series of observations, running through days; but as this would render necessary a corresponding series of observations at the top of the mountain, which is impossible at such an altitude, its uselessness becomes apparent. Again, if I had gained the top of the mountain at any other time of the day, the thermometer would have read very differently. At two o'clock it marked 39.00, and in twenty minutes—the limit of our stay—it had fallen to 36.00. Such is the rapid change of temperature that takes place as the sun begins to decline at such an elevation. Thus it will be perceived that this mode of correction, by taking the mean of a single observation at each station, is unreliable, and a series of observations—which is the only way a reliable correction can be made—is impossible.* It will be perceived that the measurement of the altitude comes within

* The numberless elevated peaks scattered over the vast territory of the United States, in California, Oregon, Nevada, Utah, and other places, the altitudes of which, independent of scientific considerations, would be interesting to know; and as the increased facilities for traveling have rendered access to many of them comparatively easy to the ordinary traveler, the following rule for the barometrical measurement of heights may be found useful, and not of very difficult application for those who take an interest in the subject, but have not made the science a special study: "Observe the height of the barometer at the earth's surface, and then at the top of the mountain, or any elevated station; take the logarithms of those numbers, and subtract the smaller from the greater: multiply the difference of the logarithms of the two heights by the barometer, by 63.946; the result is the elevation in English feet. For example, say the barometer stands at 30 inches at the sea level, and at the top of a mountain 14.85 inches. The logarithm of 30 is 1.4771213, and the logarithm of 14.85 is 1.1717237; then subtracting

1.4771213

1.1717237

0.3053976

Multiply this by 63.946, which produces 19.529 for the elevation in feet. This method was introduced by 'Halley.' Why logarithms are introduced in the calculation is: air diminishes, not in arithmetical progression, but in geometrical, and the relations between arithmetical and geometrical progression is the same as that between a series of logarithms and their natural numbers, and it occurred to Halley to apply a common table to the solution of these questions."

The correction for temperature I have already given, which can only be correctly applicable to limited altitudes where a succession of thermometrical observations can be made at each station running through the twenty-four hours of the same day. It is many years, however, since I have given this subject particular attention, and in the progress of science in the interval, it is possible a more correct method may have been found. The mountain barometer is now made so portable that it can be carried almost anywhere, but if attention is not paid to its proper adjustment, it will be but time thrown away in attempting to arrive at anything like a correct result. To be competent to do this, a practical acquaintance with the instrument is necessary.

nine feet of that set down by Don Miguel Lerda de Tajada. However exact my calculations may have been, everything was much in my favor for making a correct estimate. The weather, which, after the careful adjustment of the barometer, is of the first importance, was most favorable, being free from those atmospheric visitations, such as storms, thunder, lightning, rain, etc., which render the mercury so restless in its glassy bed; and however reliable it may be as a monitor at such a time, giving warning of changes, it is then less truthful in indicating the true atmospheric pressure by which altitude is ascertained.*

Our faces were now turned downward. We commenced the descent of the snow-bank in a similar manner to that in which we ascended. After we had passed down, one by one, with the aid of the rope into the gap, Antonio and his son remaining behind holding it, a dispute arose between them as to which of the two should remain last. The son insisted that he should remain and hold the rope for the father. The father was equally determined as his son, to have his way. As valuable time was likely to be lost in their dispute, both appearing as stubborn as mules, to the credit of their hearts, be it said, I got the whole party to unite in calling Thomaso down, which turned the scale in favor of the father, the son reluctantly yielding, joined us. We were gratified at this, as there was some risk; it was better that the older and more experienced should undertake it. The first fifteen or twenty feet of the declivity was the most perilous, its inclination being much too near a right angle for safety: but the guide well supplied with spikes for his shoes, and hooks for his hands, soon left danger behind; sliding down most of the way with a speed, which, if his nether garments had not been made of leather, would not have left a shred hanging to him. Leaving the gap for the last time, our route lay over the same ground as that by which we had ascended; the descent being equally trying on the limbs, or nearly so, though fortunately not on the lungs. As the distance from the summit increased, so did the innumerable streams and rivulets, which came pouring down from the melting snow above, and the saturating which our lower garments received in the cold snow-water while crossing them, was anything but pleasant, and re-

* There are portions of the globe where the fluctuations of the mercury do not indicate that state of the weather which we are taught to believe it usually presages. In Iceland a falling barometer often presages a continuance of fine weather. In that land of paradoxes even 'the faithful compass' is not always true to the pole, "but indulges in flirtations with local magnets to the peril of those who rely on her constancy;" snow-storms often overtake hay-making; people fish for ocean cod in inland lakes; timber is got from the sea; thunder and lightning are common at Christmas and rare in mid-summer; optical illusions occur in which nine suns are sometimes seen in winter, while the frozen inhabitants are shivering for the warmth of one; immense ice-fields cover the surface of the earth, yet the ground is often too hot to walk upon: "and to wind up this strange catalogue," says a reviewer of an Englishman's travels in that land of wonders, "travellers go to bed in churches, peasants talk Latin, and servant-girls study history and geography."

tarded us somewhat in our movements. Fortunately we did not have to contend with these obstacles in the morning, the sun not having then sufficient power to melt the snow, but as the day advanced its influence began to be felt, until hundreds of streams, some of them of considerable magnitude, might be seen rushing down the slopes, twisting and turning in the intricacies of the mountain-side, or driving over precipices, creating a commotion, and producing a singular change in the appearance of objects from that which the morning presented. On gaining the chasm, we found it to be a receptacle of quite a number of those streams which went spouting over its perpendicular sides in a variety of cascades, many of them retaining their solid curved outlines until they had fallen to a vast depth, then scattering in spray and mist, before the bottom was reached. Indeed, the sun, playing in ever changeful rainbows on the mist, disclosed to us the fact, that it rose again from out the chasm, to be once more converted into the snow by the low temperature prevailing during the evening and night. This double transformation from water into mist, and from mist into snow, goes on diurnally since the continent was first upheaved, or at least since the mountain was thrown up to its present altitude; for it may have taken more than one convulsive, throw of mother earth, perhaps at widely different intervals, to produce so huge a "Pap."

We crossed the gulf, however, in safety, but received a thorough wetting from the spray with which it was filled. Dragging our weary limbs across the broad sand slope, we finally gained the point where I had marked the limit of vegetation. Here we had a view of the mules, quietly grazing below, looking no larger than so many rabbits, and with the aid of the glass I could perceive one of the rangers amusing himself by hurling rocks down the side of the mountain. We had much more difficulty in descending from this point to where the mules were stationed than we had in ascending in the morning, and the consequence was, it became apparent, for the first time, that there was a likelihood of our having to spend the night among the crags. We, therefore, lost no time in mounting our animals as soon as the nature of the ground would allow, and pursuing our way down at as fast a pace as safety would permit. Approaching the uppermost edge of the pine wood, this unwelcomed anticipation became a certainty. Our hopes now lay in having sufficient light to take us to that point of the wood through which we had emerged in the morning, where sufficient grass, water and wood were to be found. We were about to bid a very reluctant farewell to the sun, whose lower limb began to dip below the horizon, when I thought I heard the low notes of a horn, indistinctly floating upward from the valley; so indistinct indeed was the sound, I paid but little attention to it; but again, as if caught by a current of air, it swelled out into a volume that dispelled doubt. Turning to the guide, I saw that his ear too had caught the sound. Surprised, I asked if the sound of a horn could travel all the way from the valley below. "No, señor," was the reply, "we could not hear it half

the distance." "Where then," inquired I, "do you think it comes from." "From the point of the wood, señor, where we came out this morning. I know the sounds well," continued he, "they come from Francisco's cow-horn, and it puzzles me to know what brings him up here. He is a lazy fellow, and would not come without being sent. That you may rely on, señor." Urging our mules as fast as it was possible under the circumstances, we arrived at the point of the wood as daylight was about taking its final departure. Here we obtained a solution of the mystery. It appeared that the good old Spaniard, old as he was, had climbed to a projecting crag, and, with the aid of a glass, had followed us in our route nearly the whole day, and seeing, on our returning, that we could not arrive in time to cross the broad belt of timber it took so long to pass in the morning, and which could not be crossed at night, he very considerably dispatched Francisco with a couple of mules, one of which was loaded with our blankets and a goodly supply of provisions, consisting of a piece of roast venison, a turkey, some fowls, an unlimited supply of hard-boiled eggs, tortillas and some bread. The Doctor already had out one of the three bottles of our own brandy, that accompanied this welcomed supply. Tired and half famished with hunger, never did the "Chosen People" hail the manna poured down from above with more gratitude than we hailed the shower of eggs which Francisco poured out upon the grass, while countless blessings were showered upon the head of the venerable celt, to whose forethought we were indebted for the timely succor. A good camping place for the night being of importance, Antonio led the way a short distance into the pine wood, to a clear grassy plot, not far from which gushed forth a fine clear spring, which, flowing into a hollow of the rock out of which it sprung, formed a capacious natural fountain. The prostrate trunk of a pine bisected the little plot, against which we built a large fire, the blaze from which lighted up the trees and rocks in wild picturesqueness. Stretched out before it in all the abandon of savage life lay the tired party, busily employed in demolishing the plentiful repast, which truth to tell was done in a manner highly satisfactory to all parties. Indeed, under the influence of frequent potations, they seemed to have entirely forgotten the fatigues of the day. The icy coldness of the water from the spring being remarked and commented upon by all who drank it, I took the thermometer to the fountain to try its temperature. I found it to be as low as 34° Fahrenheit. Water of this temperature could hardly come from any other source than from ice, that is from an ice-cavern.* It was very different water, and of lower temperature

* The Rev. G. F. Browne, Fellow and Assistant Tutor of St. Catharine's College, Cambridge, England, and a member of the Alpine Club, has just published in a volume a description of twelve ice caves he has visited in France and Switzerland—caves varying from fifty to two hundred and fifty feet below the surface of the earth, unconnected with glaciers or snow mountains, and in latitudes and at altitudes where ice could not, under ordinary circumstances, be supposed to exist. The measurements which the

to that of the cascade close by, which flowed directly from the snow above. For a moment, it seemed impossible to reconcile the location with its existence. "An ice-cavern buried in the depths of a volcano!! from one side of which flows boiling hot sulphur springs* while from the other pours forth this stream of ice-water. But reflection strengthened rather than shook my opinion. The Doctor, who had accompanied me to the spring, and who—whether from the influence of more than one potation which he had partaken of, I will not presume to say—seemed to be in a very merry, jocose frame, received the information in a manner anything but flattering to my judgment, which, under the circumstances, did not very much surprise me. Still I was not quite prepared for the ridiculous display he made. "An ice-cavern," exclaimed he, in incredulous astonishment, bursting into a fit of laughter. "A subterranean ice-house, egad. This is a fast age and no mistake; but faith it's a daring one as well," continued he, with a grin it would be impossible to describe. "The idea of an ice-cavern buried in the recesses of a 'burning mountain' goes a little ahead of anything, that ever before entered this unsophisticated brain of mine. Permit me to congratulate you, my dear sir," said he, taking off his hat, and making a low bow, "on making so important a discovery."

"You jump at conclusions," said I, "there is no positive discovery whatever. It is simply a very natural conviction arrived at—strange author gives of the masses of ice in the caves were certainly taken under awkward circumstances—" in dark caves, lighted by one, or sometimes by two, candles, with a temperature varying from slightly above to slightly below the freezing point, and with no surer foothold than was afforded by slippery slopes of ice and chaotic blocks of stone." In the neighborhood of Fort Bridger, in the basin on the western slope to the Rocky Mountains, high up on a rugged mountain range may be found another of those peculiar springs. It is situated directly on the trail to Salt Lake and California, in a natural grotto in the rock on the way side, which is large enough to hold two or three horses while drinking, and is remarkable for its location and peculiar formation, being in the shape of a perfect, though large trough, out of which horses usually drink. My attention was drawn to this spring while journeying to the Pacific coast shortly after the Mexican war, a period when this wild region was much less frequented than it is at present. Toward the close of a hot toilsome day's journey, I came upon this welcome and refreshing water accompanied by a solitary Indian, an employé of the proprietor of the fort, familiarly known as "Jim Bridger." Tired and thirsty as our horses were they refused to drink, or at least did not take that long thirsty draught that way-worn horses usually do. I was surprised to see them take a swallow of the water, and hold up their heads as one would do who had taken something into their mouth either too hot or too cold. This they repeated several times, until the palate of the mouth became accustomed to the coldness of water. On taking a drink of it myself, its intense coldness compelled me to follow the example of my horses. Its temperature proved to be as low as 34° Fahr. I have little doubt this spring marks the location of a hidden deposit of ice. Thousands of California and Mormon emigrants must have drank of it since, and few that have done so could ever forget it; for good and cold water is the exception, not the rule, in that region.

* These springs find their way to Puebla, and give her the finest warm baths in the world.

as the locality appears to you—by the aid of facts. The water which you just now drank out of the spring, from its extreme low temperature could come from no other source than directly from ice. It is from this fact, as well as from others, of a geological character, not necessary to trouble you with, seeing you are bent on a more genial pursuit, if I may judge by the can of water by your side, that I form those conclusions, which do not seem to meet with your serious consideration."

"Conclusions," my dear sir, replied the incorrigible doctor, "when based on evidence so important, and when formed by one, whose judgment, permit to say, is unerring, amount to positive fact. I will, therefore, proceed to dispose of this wonderful ice-cavern, for your benefit. I have no doubt there is more than one speculative genius among the party who will develop the hidden congelation for the benefit of suffering humanity. Ho! ho!" he bawled out to the party at the fire, some distance off. "Here's a right smart chance for some smart Yankee. A subterranean ice-house already stocked to hand, and two right smart towns to be supplied, within striking distance. Who bids? who bids? Speak up ye acquisitive and inquisitive sojourners on the 'Hub of the Universe,' now is your opportunity to convert the natives, and make 'a little something' by supplying them with ice for their cocktails at the same time. Will nobody bid?" cried he, "then I'll knock it down to myself; come out here and squat, and marry that pretty little black-eyed wench that made our coffee this morning." Reminding him that the young lady in question was already disposed of, I turned away in disgust at his levity, upsetting, as I did so—accidentally of course—the can of water he had intended for his 'punch.'

I spent some time in examining the locality by the light of the blazing pine fire, and discovered nothing to shake my belief. On the contrary, the peculiar configuration of the mountain side, in the neighborhood of the spring, highly favored the supposition. And I have little doubt a large deposit of ice exists, which could readily be made available, as access to the place from this valley is comparatively easy. Should the teeming resources of this fruitful and interesting country ever be fairly open to American enterprise, the existence of ice-caverns not only in Popocatepetl, but in other elevated regions, will be established beyond all question.

When I returned to the fire, most of the party were disposed of for the night, wrapped in their blankets on the grass. I, too, sought a soft spot, and disposed of myself in a similar manner. The Doctor, and one or two others, still sat up, indulging in social gossip. Such a trifle as the upsetting of his water did not in any way interfere with his punch-making, as the odor impregnating the pure mountain air fully attested. The last thing my fading senses were conscious of, before dropping into entire forgetfulness, was hearing the following rather suggestive latin quotation from him, as he related to Don Manuel some incidents in Roman history. "*Miserrima est fortuna qui inimico caret.*" (Most wretched is the fortune of him who has

not an enemy.) The gray dawn was breaking when I awoke, shivering with cold. The fire had gone down during the night, and the morning air had in it a sharp, stinging cold, more painful than is felt at a much lower degree of temperature, the thermometer marking but 28° Fahrenheit.

No one being yet awake, I piled a supply of wood on the fire, the blaze from which soon diffused warmth around, deepening the repose of the sleepers, as their increased snoring and deep and heavy breathing plainly indicated. Loth to rob them of the little more rest I knew they would be allowed to take, I threw a blanket over my shoulders and followed our tracks to the cascade outside the wood. The cascade was gone, however, its source having been frozen up during the night. Here I found the ground so thickly covered with frost, that it looked as if it had recently snowed. Indeed, on examining the particles closely, I found them, from their size, to consist of frozen vapor or snow, and not the more delicate frost which is frozen dew. The view that I anticipated enjoying, was wrapped up in what well might be termed a "Scotch mist." It was a cold raw mist too, that shut everything from view, and made me glad to return to the shelter of the wood, and the warmth of the camp fire. Here I found one of the rangers busily employed in unceremoniously waking up his companions. As everything had been consumed the night before, even to the last drop of brandy, that very indispensable meal called breakfast we had to forego. We were, however, the sooner ready to start. In the mingled sounds proceeding from the saddling of mules, the jingling of spurs and stirrup irons, and oaths levelled at refractory mules, the voice of the doctor was not once heard. Seated on a log, his hands under his chin, his face pale, and would be called haggard, but for the humorous twinkle of the eye which seemed ever to dwell there, he presented a picture of comical lugubriousness, which the pencil of a "Leach" only could have done justice to. Suspecting how matters stood, and having a small flask in my pocket in which some brandy remained, I approached and asked him how he felt. "Not particularly bright, I must confess," replied he, "I feel a little sickish, but 'twill pass off. You haven't got a drop of brandy about you. Have you," continued he, looking up anxiously. "Not a drop doctor I am sorry to say. See for yourself," said I, handing him the flask. With a disappointed look he mechanically took and shook it. It was refreshing to see the sudden change from blank disappointment to droll satisfaction that marked his countenance, on discovering that it was not empty. He closed one eye for the space of half a minute at least, puckering up the whole side of his face into an expression so irresistibly comic, that I fairly shook with laughter. "I must confess you did that well," said he, "I never was more agreeably disappointed in all my life." The doctor was no vulgarian, he did not place the flask to his mouth and suck out its contents, but went and procured a measure, the one belonging to it not being large enough, in which he manufactured what he called a delicious cocktail, which being declined by me, he lost no

time in swallowing. "You, of course, have had your bitters," said he interrogatively, as he handed me back the flask. "No," I replied, "I rarely drink before breakfast, for it invariably gives me a headache the remainder of the day."

"Don't be a hypocrite," rejoined he, looking at me half seriously. A little nettled at his remark, I enquired if he thought I looked like one. "No you don't, and that's one of the reasons why I like you," said he, bluntly, and with a patronizing freedom of manner, that in any other man would seem like impertinence.

"Of all the animals that walk the earth," he went on, reseating himself on the log, inviting me to follow his example, "a hypocrite is the most despicable. I do not allude to or include that fine drawn hypocrisy that seems to be inseparable from a civilized state of society, and is an evidence of the imperfect condition of our being, but the positive vulgar hypocrisy of the day," continued he, warming with the subject and the brandy. "He who cheats man and tries to cheat God by an appearance of piety, he either does not feel, or cheats himself into the belief that he feels, who has not the courage to rob but the meanness to steal, who will give hundreds in ostentatious charity, and leave a poor relation to starve, who will take your hand, smile in your face, and kindly enquire the state of your health, while he is ready to cut your throat with hatred and malignity." There is no knowing when the doctor would have ended this catalogue of hypocritical characteristics, had he not been interrupted by the sergeant of the rangers, soliciting advice as to the disposition of one of the mules. He accordingly postponed his "disquisition," as he called it, for a future occasion. As soon as the light was strong enough to penetrate the forest we commenced the descent, and in about a couple of hours arrived at the ranch of the old Spaniard, where a plentiful breakfast was already on the table awaiting us.

The party were all pleased because the breakfast was good; the old Spaniard was pleased that he was thanked by each one for his kindness and forethought, in sending us succor; the patrona was pleased because her husband, Antonio, had returned, and the young black eyed wench, all unconscious of the disposition which the doctor intended making of her, was pleased at the return of her Thomaso safe and sound. Every one being satisfied with himself, the breakfast went off in the pleasantest manner possible. A pressing invitation to stay and spend the day we declined, the doctor being anxious to join his men, no officer higher than a corporal being left in command, he having yielded to the sargeant's solicitations to accompany us. We accordingly took leave of the old Spaniard and his family, and took the way to our quarters at the ranch of Pedro Hernandez, still accompanied by Antonio and his son, who, seeming to like our company so well, were reluctant to leave us. We found everything in order on our arrival, and no complaints made against the rangers, who conducted themselves properly during our absence. The excitement which in a measure sustained us during the ascent and descent of the mountain, now entirely died away, leaving behind

a weariness and dullness, which the tolerably good dinner prepared by the patron, did not entirely dispel. We therefore sought our several sleeping places at an unusually early hour.

ART. V.—MANUFACTURES OF MISSOURI.*

THERE is no branch of general industry to which Missouri has paid less attention than to manufactures. The rare advantages of the State have not been improved. The amount of our domestic products is by no means commensurate with our facilities for manufacture. The last census exhibits a palpable neglect of this department of industry.

In 1860, the total value of our national manufactures was \$1,900,000,000. The workshops of the country employed 1,400,000 persons, and supported 5,000,000. The sum which Missouri contributed to this enormous aggregate is reproachfully small. In 1860, the total number of manufacturing establishments in the State was 2,800.

Their capital was.....	\$20,500,000
Value of raw material.....	24,000,000
“ “ annual product.....	43,500,000
Number of workmen.....	21,000
“ “ persons dependent upon manufactures.....	62,000

A few comparisons will illustrate the insignificance of our manufactures.

CAPITAL OF MANUFACTORIES IN 1860.

New Hampshire.....	\$25,900,000	Ohio.....	\$58,000,000
Massachusetts.....	133,000,000	New York.....	175,000,000

VALUE OF RAW MATERIAL.

New Hampshire.....	\$24,400,000	Ohio.....	\$70,000,000
Massachusetts.....	141,000,000	New York.....	210,000,000

VALUE OF PRODUCT.

New Hampshire.....	\$45,500,000	Ohio.....	\$125,000,000
Massachusetts.....	266,000,000	New York.....	379,000,000

NUMBER OF WORKMEN.

New Hampshire.....	33,000	Ohio.....	81,000
Massachusetts.....	217,000	New York.....	221,000

NUMBER OF PERSONS DEPENDENT UPON MANUFACTURES.

New Hampshire.....	108,000	Ohio.....	243,000
Massachusetts.....	651,000	New York.....	663,000

NUMBER OF ESTABLISHMENTS.

New Hampshire.....	2,582	Ohio.....	10,710
Massachusetts.....	7,766	New York.....	23,296

* From a pamphlet by Professor Sylvester Waterhouse, on "The Resources of Missouri," from which we shall make up several articles relating to the industrial progress of that growing Commonwealth. We thank the author for a copy of his able report.—EDITOR REVIEW.

From this table it will be observed that Missouri with an area more than seven times that of the Granite State, is still inferior to New Hampshire in manufacturing activity. Our want of energy is conspicuous in the very articles which Missouri is best fitted to produce. The following figures show the value of special products for the year 1860 :

FURNITURE.

Missouri.....	\$200,000	Ohio.....	\$3,700,000
Massachusetts.....	3,365,000	New York.....	7,175,000

AGRICULTURAL IMPLEMENTS.

Missouri.....	\$280,000	Ohio.....	\$2,690,000
Massachusetts.....	1,740,000	New York.....	3,429,000

PIG, BAR, AND ROLL IRON.

Missouri.....	\$1,100,000	Ohio.....	\$3,000,000
Massachusetts.....	1,694,000	New York.....	3,600,000

CAST IRON.

Missouri.....	\$1,041,000	Ohio.....	\$1,650,000
Massachusetts.....	1,800,000	New York.....	8,216,000

MACHINERY.

Missouri.....	\$750,000	Ohio.....	\$4,855,000
Massachusetts.....	5,131,000	New York.....	10,484,000

SAWED AND PLANED LUMBER.

Missouri.....	\$3,700,000	Ohio.....	\$5,600,000
Massachusetts.....	2,288,000	New York.....	12,485,000

FLOUR AND MEAL.

Missouri.....	\$8,997,000	Ohio.....	\$27,129,000
Massachusetts.....	4,196,000	New York.....	35,000,000

COAL.

Missouri.....	\$8,200	Ohio.....	\$1,539,000
Illinois.....	964,000	Pennsylvania.....	2,833,000

LEATHER.

Missouri.....	\$368,800	Massachusetts.....	\$10,354,000
Pennsylvania.....	12,491,000	New York.....	20,758,000

BOOTS AND SHOES.

Missouri.....	\$868,700	Massachusetts.....	\$46,440,000
Pennsylvania.....	8,197,000	New York.....	10,878,000

TOTAL PRODUCTS OF INDUSTRY.

Missouri.....	\$43,500,000	Massachusetts.....	\$266,000,000
Pennsylvania.....	285,500,000	New York.....	379,600,000

PIG AND WROUGHT IRON IN 1865.

Missouri.....	\$2,740,800	West Virginia.....	\$3,379,600
Kentucky.....	3,208,000	Ohio.....	20,588,600

In 1865, the value of the cotton manufactures of Massachusetts was nearly \$100,000,000.

But it may be justly alleged that there is an obvious unfairness in

instituting comparisons between young and old States. Consider indulgently the youth and servile impediments of the State, make every allowance which a justice tempered with partiality may require, and then the inference that Missouri has neglected its vast manufacturing facilities is unavoidable. These statistics are adduced not to aggravate past remissness, but to stimulate future effort.

An era of greater activity has already begun. In St. Louis, for the year ending October, 1865, the United States Assessor reports an average of ten licenses a day for the opening of new establishments. During the same period, there was an increase of 5 per cent. in the manufacture of clothing, cotton fabrics, boots, shoes, iron and wooden ware.

It is obviously unnecessary to enumerate the articles that ought to be manufactured in Missouri. There is scarcely a want or a luxury of human life which this State is not able to satisfy by products of domestic manufacture.

Accessible forests of various and valuable lumber cover whole counties, and yet we import annually 150,000,000 feet of lumber, at a cost of \$6,000,000.

Admirable water power abounds in almost every part of the State, yet we allow the spendthrift streams to squander their energies. The daily flow of Gunther's Spring is 5,000,000 cubic feet of water, and the discharge of Bryce's Spring is more than double that quantity. The water is so warm that it does not freeze. It is copious, unfailing, and iceless. Conditions more favorable to the manufacturer can hardly be imagined. This great power which is now running to waste should be set at the earliest moment to the music of machinery. It should be taught to drive the wheels of saw-mills and to whirl the spindles of woolen and cotton mills. No sound reason can be offered why this State should not produce its own textile fabrics. The only cotton mill in St. Louis has met with a success that ought to lead to the erection of other factories.

Indian hemp is now assuming a commercial importance among the great staples of the world. The rapidity with which this commodity has entered into the trade of nations recalls the earlier years and sudden expansion of the cotton traffic. The Commissioner of Internal Revenue, in his last Report, gives the following table of the exports of Indian hemp. The average weight of the bales is 300 pounds.

Years.	United States.	France.	Great Britain.	Other Countries.	Total pounds.
1856	20,474	20,169	248,651	1,045	87,101,400
1857	31,740	24,055	242,770	2,555	90,336,000
1858	38,308	21,314	197,441	4,309	78,411,600
1859	27,725	28,713	391,741	1,519	134,909,400
1860	1,704	33,804	360,725	2,113	119,503,800
1861	16,501	36,383	301,798	1,426	106,802,400
1862	17,807	23,780	365,505	12,573	125,899,500
1863	16,120	12,555	707,078	13,794	224,864,100
1864	16,646	7,933	552,748	161,332	221,597,700
1865	28,804	8,999	754,714	26,260	245,633,100

The importation of jute into the United States is already very large. The extent of our imports is shown in the annexed exhibit :

Years.	Gunny-bags.	Pounds.	Yards of Gunny-cloth.	Pounds.	Total Weight.
1856	6,423,200	12,846,400	23,358,000	49,635,750	62,482,150
1857	4,669,650	9,339,300	15,003,570	31,882,586	41,221,886
1858	4,562,327	9,124,654	19,170,000	40,736,250	49,860,904
1859	4,266,400	8,532,800	25,489,020	54,164,168	62,696,968
1860	3,294,945	6,589,890	26,631,180	56,591,259	63,181,149
1861	8,208,725	6,417,450	8,517,060	18,098,753	24,516,203
1862	3,376,786	6,753,572	6,896,100	14,654,212	21,407,784
1863	3,703,000	7,406,000	669,600	1,422,900	8,828,900
1864	2,676,800	5,353,600	392,400	833,850	6,186,450
1865	6,875,215	13,750,430	1,834,920	3,899,205	17,649,635

In 1865, 305,166 bales of jute were imported into the United States. It is important to notice the immediate source of these importations.

From India, raw material	8,641,200 pounds.
" Great Britain, "	3,000,000 "
" " manufactured goods.....	24,000,000 "
" India " "	55,908,600 "
Total	91,549,800

The Commissioner very justly thinks that the 24,000,000 pounds of Indian fabrics which are imported from England should be manufactured in this country. The raw material should be brought directly from the land which produces it, and wrought into gunny-bags and burlaps in our own factories. This would not only secure to the United States the profits of manufacture, but cheapen the product and enlarge our trade with India. But perhaps it is possible for us to obviate the necessity of importing jute. It is thought that some of our own lands are suited to the production of Indian hemp. An experiment whose success would increase the agricultural and manufacturing prosperity of the country ought to be subjected to an early and exhaustive trial. It may be found that the lands of Southern Missouri are fit for the growth of this staple. The successful culture of Indian hemp in this State would confer upon St. Louis a new facility for the distribution of the products of the Mississippi Valley.

Flour ought to be one of our largest products. Our streams furnish a cheap motive power and the means of transportation. Our brands are the best in the Eastern Markets. Yet, in 1860, the products of our flour mills was less than half the quantity made in Illinois.

The annual cost of imported paper is millions of dollars. Paper factories would not only save our citizens this great expense, but convert our refuse cotton, flax, straw and sorghum into sources of wealth. The Spanish atocha or esparto—50,000 tons of which are annually imported into England for the manufacture of paper—would doubtless thrive on the sterile slopes of the Ozark range, and become an important and industrial interest.

After the completion of the Pacific Railroad, St. Louis will become

an entrepot of the precious metals extracted from the mines of the Rocky mountains. Then, if the interests of the West are consulted, the National Government will establish in this city a branch mint, and individual enterprise will erect factories in which silver and gold will be fashioned into articles of use and ornament. In the manufacture of watches, this country has already declared its independence of Europe, and it is very strange if American ingenuity and taste cannot equal the artistic skill of the Old World in the production of jewelry.

The granites of Missouri are coarse and strong. They would make an excellent building material for stores and public edifices, but thus far the quarries have been left almost untouched. Marble has been brought to St. Louis from Vermont, and yet there are in this State numerous beds of compact, fine-grained, and durable marble. The colors are various: white, blue, and yellow marbles are common. Other varieties are clouded, mottled with pink and purple, veined with spar, and capable of high polish.

A fine lithographic stone is found in Macon County. A native specimen which is an excellent substitute for the foreign article has recently been exhibited in this city. Bavaria may find a rival in Missouri. If the rest of the quarry proves to be as good as the sample, it will be a valuable element in the resources of the State. Lithographic stone is now selling in this market at from 10 to 30 cents a pound. Large blocks are very expensive.

Missouri ought to manufacture her own paints. The material is abundant. Blue, pink, purple, red, yellow and white paints can be made from the mineral which our own soil contains. White lead and the oxyde of zinc can be made in illimitable quantities from our own materials. The supply of ochres, barytes, uranium, manganese, cobalt, red chalk, China clay and *terra di siena* exceeds any probable demand for the manufacture of paints.

Fire-clay, rivaling the best deposits of Europe, is found within four miles of the St. Louis Court House. The bed is fifteen feet thick, and very extensive. An analysis shows the following elements:

Silica.....	53,94
Alumina, with some peroxyde of iron.....	33,73
Lime.....	1,17
Magnesia.....	a trace
Water.....	10,94
Total.....	99,78

Fire-brick made of this clay is capable of resisting very high temperatures. The excellence of the material recommends it for retorts, alembics, crucibles, and furnaces. The kilns of this manufacture ought to be far more numerous.

Formerly, fire-rock was brought from remote States for the bloomeries at Ironton. This fire-rock, imported at a very heavy expense, seldom lasted more than five months. But a few years ago,

a geological examination discovered a superior quarry in the immediate vicinity of Iron-ton. This fire-rock is very refractory, and often resists the heat of the furnaces for 17 months.

Missouri is adapted to the manufacture of furniture and agricultural implements. Lumber and transportation are cheap. St. Louis should be the factory and emporium of every kind of wood-work which the house and the farm require. It should manufacture everything from a chair to a piano—from a hand-rake to a patent reaper—from a wagon to a rail-car. In 1860, the value of the furniture and agricultural machinery produced in Missouri, Illinois, and New York, was respectively \$483,000, \$3,425,000, and \$10,600,000. This branch of manufactures, which is destined to be a prominent industry in Missouri, will yet increase the capital of the State by an annual product of millions of dollars.

Adepts consider the plastic clay which is found at Commerce fully equal to that of Devonshire. It is as fine and almost as white as flour. The best potter's clay and kaolin exist in quantities that preclude the idea of exhaustion. All this State needs to become famous for its crockery and queen's ware is skillful labor from the potteries of Europe. The materials and capital for the manufacture of earthenware and porcelain are abundant. Art alone is requisite.

Near Ste. Genevieve there is a bank of saccharoidal sand which is twenty feet in height, and miles in extent. The mass is inexhaustible. Two analyses give the following result:

Silica.....	98.81	99.03
Lime.....	0.92	0.98

The sand is very friable and nearly as white as snow. It is not oxydized or discolored by heat, and the glass made from it is clear and unstained. One firm in this city has annually exported more than 3,500 tons of this sand to the glass manufactories of Wheeling, Steubenville and Pittsburg. The possible benefit which this industry might confer upon St. Louis may be inferred from the statistics of the glass manufactories of Pittsburg. In 1866, in the exclusive manufacture of bottles and window pains,

The number of men and boys employed was...	1,800
" " " tons of silica consumed.....	242,000
" amount of annual wages.....	\$1,396,500
" value of annual product.....	\$2,160,000

There are also 19 manufactories of flint glass in which

The number of workmen is.....	2,330
" amount of weekly wages.....	\$19,000
" value of the factories.....	\$1,298,000
" number of bushels of coal.....	2,095,800
" worth of yearly product.....	\$2,000,000

There are in all 35 glass-works, employing a capital of \$6,800,000

A large portion of the silica used in the glass-factories of Pittsburg is carried from Missouri. Instead of incurring the expense of two transportations and paying to distant establishments the cost of

production, our own factories ought to meet all our domestic wants and supply the markets of the West.

There have been repeated instances of the importation of lead from New York into Missouri. While the earth beneath our feet is rich with incalculable masses of galena, we satisfy the demands of our internal commerce by importations from the Atlantic frontier. There is no article made of lead that ought not to be produced in our own factories. It is a reproach to our State that the orders of our lead market should be filled one thousand miles from its own metropolis. The few manufacturers who are converting our native ore into the commodities of commerce are rapidly enriching themselves.

Our iron manufactures are altogether inadequate to meet the wants of Missouri. With three mountains of iron in our midst, we import almost all our hardware. Ore yielding 56 per cent. of pure iron can be bought at Pilot Knob for \$1.50 per ton. At St. Louis, the price is \$3.50 a ton. This ore is carried to Pittsburg, manufactured into nails, reshipped to our market, and sold, exclusive of freight, for \$125 a ton. A ton of pig iron is sold to a Boston manufacturer for \$65. It is shipped to its destination by way of New Orleans. At the Eastern factory it is wrought into files and then sent back to the starting point. One-half of the material is lost in the process of manufacture, but the half-ton of files costs the St. Louis merchant more than \$1,000.

St. Louis imports railroad iron from Cambria, Pa. The cost at the works is \$85 a ton: the freight to St. Louis is \$20 a ton. Hence our merchants are paying more than \$100 a ton for railroad iron which home manufactories ought to supply at one-third of this cost. The Union Pacific has already expended \$2,200,000 for rails. Two years ago, this Company paid for rails, delivered at their destination, \$140 a ton. The present price is \$120 a ton. It is estimated that the railroads of Missouri will need, during the year 1867, 50,000 tons of railroad iron. This will cost, at the low average of \$100 a ton, \$5,000,000. The expenditure of so large a sum in our own foundries would save freight, pay the price of manufacture to our own machinists, foster domestic industries, and invigorate the business activities of the city. These are only representative facts. Hundreds of such illustrations might be presented. Our iron-mills ought to be equal to our resources. With coal and wood abundant and cheap, with masses of ore which centuries cannot exhaust, St. Louis, or its vicinity, ought to be the great central machine-shop of the West. Our iron-works should rival those of Pittsburg, Birmingham, and Sheffield. The importation of iron manufactures into Missouri should speedily cease. Every kind of tools and machinery, every article of iron or steel, from the hair spring of a watch to the largest engine, from a nail to a 20-inch columbiad, should be fashioned in our own establishments.

Sugar, if not a necessity, is one of the prime luxuries of life. The quantity of sugar consumed in the United States in 1865 was about 800,000,000 pounds. New York, whose refineries exceed in capac-

ity of production those of all the rest of the country, compels the other States to pay tribute to her enterprise. But in this branch of manufacture, St. Louis has made creditable progress. Under prudent and sagacious management, the St. Louis Refinery—to whose able President I am indebted for the subsequent facts—has expanded into an establishment whose annual transactions amount to more than \$3,000,000. In 1866, it refined 22,000,000 pounds of raw sugar. The cost of the sugar imported into the United States in 1866 was—exclusive of the import of three cents a pound payable in coin—\$40,000,000 in gold. Missouri will doubtless be able to co-operate with the North West in preventing this large export of treasure.

France and Germany manufacture most of the sugar which they use from beets of domestic growth. This sugar enjoys no immunities. It is secured against foreign competition by no protective tariff. It is subjected to the same duties as the product of the tropic cane. And yet it not only sustains itself, but successfully competes with the sugars of Cuba and Java. Of the present crop, 100,000,000 pounds will be exported from France to England. There is no need of going to Havana for our sugar. Our Western prairies can equal the saccharine riches of the Indies. They yield as fruitful crops of the sugar beet as France or Germany. Analyses made at Chicago, and at Washington by the Agricultural Bureau, show that the American beet contains as large a percentage of pure sugar as the European beet. It has also been ascertained that the American beet can, in high latitudes, be preserved through the winter uninjured. A company, with a capital of \$160,000 has purchased 2,000 acres of land in Northern Illinois for the purpose of raising beets and manufacturing sugar. The experiment will certainly succeed, if the managers are careful to procure proper machinery, skillful labor and scientific supervision. The quantity of beet sugar which the West is capable of producing may be calculated from the estimated crop of foreign countries in 1865:

Holland.....	10,000,000	pounds.
Poland and Sweden	30,000,000	"
Belgium.....	55,000,000	"
Russia.....	100,000,000	"
Austria.....	190,000,000	"
Zoll Verein.....	370,000,000	"
France.....	510,000,000	"
<hr/>		
The aggregate.....	1,265,000,000	"

is more than one-third of the annual consumption of Europe. In 1866, the sugar crop of France was 540,000,000 pounds.

A cultivation of the sugar beet commensurate with the area adapted to its growth would add hundreds of millions of dollars annually to the wealth of the West. In the development of this new growth, Missouri ought actively to participate. The mildness of our climate is the only obstacle to success. The temperature

must be sufficiently cold to prevent germination during the winter months. If the beet sprouts, it becomes unfit for the manufacture of sugar. Our low latitude does not preclude the raising of the beet, and if our Winters are unfavorable to its saccharine qualities, the crop can be shipped to manufactories further North. Apparently nothing can prevent the culture of the beet from becoming one of the most profitable resources of Missouri. Beet sugar of domestic manufacture is not subject to any excise. Last year, a company of Germans, in Livingston county, Illinois, engaged in the manufacture of beet sugar. Mr. Bender gives the following results of the experiment. More than 4,000 tons of beets were raised from 400 acres of land. The cost of cultivation was less than \$4 a ton. The varieties of beet were the "Imperial" and "White Silesian." The juice contained from 9 to 13½ per cent. of sugar. The beets yielded 7½ per cent. of superior raw sugar, or 5½ per cent. of a quality fully equal to the refined "B" sugar of New York brand. If better processes of manufacture had been used, this crop of beets would have produced 450,000 pounds of refined sugar. The period of granulation varied from 27 to 72 hours. This experiment, conducted under grave difficulties, justifies sanguine hopes of American success in the manufacture of beet sugar. The French, who make \$50,000,000 worth of beet sugar annually, claim that the yield of beets is less fluctuating and more profitable than that of sugar cane.

Sorghum, too, is rich in saccharine elements. From its easy cultivation and great productiveness, this vegetable may yet become one of our most fruitful sources of domestic sugars. The yield is from 120 to 350 gallons of juice per acre. By the aid of late chemical discoveries, the saccharine matter can now be economically granulated. Sugar and syrup, refined by the Clough process, are destitute of the peculiar acrid taste which distinguishes sorghum. If sugar can be manufactured from this material as cheaply as from cane or beet, then sorghum will at once become one of the heaviest and most valuable staples of the State. The quantity of sorghum which Missouri can produce is almost illimitable.

By an improved process of recent discovery, an excellent syrup can be profitably made from corn. A bushel of corn yields three gallons of syrup. The residuum is useful for fodder. If the chemist could only convert starch into sugar, he could transmute our cereals into a wealth surpassing the golden miracles of Midas. Corn would no longer be used for fuel. But sugar can be made from the juice of the cornstalk. There is now a specimen of this kind of sugar in the Laboratory of Washington University. It is not grape but genuine cane sugar. The discoveries of chemistry may yet render this an extensive and lucrative manufacture. But, at present, there is no probability that corn will supplant the cane and beet in the production of sugar.

An exclusively agricultural State never reaches the highest material prosperity. The wealth of nations is largely dependent upon variety of industries. A diversity of occupations creates a higher social in-

telligence, a more rapid interchange of ideas among the members of a community, better markets, a quicker circulation of money, greater economy of *materiel*, and ampler internal resources. The superintendent of the Cambria Iron Works, at Johnstown, Pa., recently communicated to the Commissioner of Internal Revenue some very significant illustrative statistics.

The quantity of food annually consumed by the population dependent upon the company is :

Beef Cattle.....	2,000 head	Swine.....	4,000 head
Sheep	3,000 "	Flour.....	20,000 bbls.

Johnstown furnishes a ready market for all kinds of agricultural products. The supply of butter, eggs, fruits and vegetables is not equal to the demand. Large quantities are imported from the neighboring markets. Unimproved land within seven miles of the Cambria furnaces is worth from \$150 to \$300 per acre. Similar land, lying beyond the influence of the Iron Works, is worth but \$20 per acre. The effect of this manufactory upon the value of real estate is perceptible fifty miles. In 1864 and 1865, this establishment paid to its workmen, \$2,995,270. As the earnings of a manual laborer are mostly expended upon the means of living, a large proportion of this great aggregate must have gone into the pockets of the adjacent farmers.

This instance may be taken as a general illustration of the influence of any kind of manufactory upon a neighborhood. Real estate and the products of the farm are always lowest where manufactories do not exist. Hence the people of Missouri are buying the manufactures of other States at the highest prices, and paying for them with agricultural productions at the lowest rates. It does not require a very profound study of political economy to ascertain that it is not an enriching process to purchase costly foreign fabrics with cheap domestic harvests. With an abundance of raw material at home, we are paying external manufacturers high prices for their goods and incurring the heavy expense of transportation. St. Louis annually imports from Boston alone about \$5,000,000 worth of boots and shoes. Instead of this outlay, other communities ought to be tributary to our own shoe factories. We are now paying out what other States ought to pay in. The great value which industry adds to material is all lost to us. The cost of production impoverishes us in just the proportion in which it enriches others.

Different kinds of manufactories utilize the various raw material of the State. At present, only the leading staples can bear the cost of transportation. Many articles of economic value are wasted, simply because there is no home consumption. It does not pay to send them to a remote market—the freight consumes all the profit. Missouri loses millions of dollars every year by this waste of available material. In a community where manufactories are numerous and varied, no commodity is lost. Every kind of raw material which has a commercial value commands its price, and is fabricated

into articles for the use of man. A thousand substances which home manufactories could transform into useful products now perish unused and worthless.

The gravest arguments of political economy urge Missouri to become a manufacturing State. By the adoption of this policy, we should enhance the value of real estate, raise the price of farm products, furnish employment to thousands of artisans, utilise all our raw material, coin into wealth the labor of production, pay to our own workmen the cost of fabrication, save the expense of transportation from remote manufactories, improve our own markets, secure the golden patronage of neighboring States, enlarge the amount and quicken the activity of capital, increase the operations and profits of agriculture and commerce, diffuse a knowledge of the arts, and promote intercourse, exchange of ideas, and the progress of Missouri to material greatness.

ART. VI.—TEXAS RAILROADS.

WE are indebted to Prof. C. G. Forshey for a copy of his able report to the Mayor of Galveston, Texas, on the "Galveston, Houston, and Great Northern Railroad," a gigantic enterprise, but, as the argument shows, entirely practicable, and promising grander results than were ever foreshadowed by any railroad project on this continent. To have projected such a road will, in the event of its completion, be the proudest recollection of a long and useful career, and there are indications that the people of Texas are fully alive to the importance and the advantages of the projected route, and will build their portion of it.

This report was presented to a Railroad Convention, at Tyler, in Smith county, Texas, in September; after its publication, was unanimously adopted, and commended to the Legislature for a charter.

Accordingly the charter was granted in November last, the preliminary stock has been subscribed, and the company organized on the 1st of June last by electing Dr. C. G. Young, of Cherokee county, president. He has entered upon his duties, and, from his great experience and talents, the public are confident of a continued, steady progress in the work of constructing the "Galveston, Houston and Great Northern Railroad," which Professor Forshey very properly calls "the greatest undeveloped railroad enterprise on earth."—EDITORS REVIEW.

CHAPPELL HILL, TEXAS, July 13, 1866.

HIS HONOR CHAS. M. LEONARD, *Mayor of Galveston.*

SIR,—The unfortunate accident which has prevented me from carrying out the intentions so liberally conceived by your Honor, in having the city corporation represented at the Railroad Convention, to meet this day at Rusk, will not entirely disable me from presenting to your Honor the outline of such views as I had matured for presentation to the Convention. They will be placed at your disposal on my return to the city.

Judging from the call of the Convention, the views of those inter-

ested do not extend beyond specific limits, Houston and Marshall, some 210 miles apart.

While we recognize the great importance to commerce, and to the development of our interior resources, of a railroad traversing the country between the important points named, it is manifest that neither of these cities is a proper terminus of any great railroad. On the contrary, Houston, though very properly the great railroad centre for Texas, as the result of her living enterprise, is fifty miles from the great seaport of the Gulf—the city of Galveston; and Marshall, a most flourishing interior town, is neither on sea nor river, and could only furnish, at most, an intersection with another road.

These seem to your engineer to be reasons why a broader view of our future needs and capacities should prevail, while we should, at the same time, encourage the effort to connect the enterprising towns and cities and fertile counties by railroads.

It appears to me, in this view, to be practicable and highly useful, while we are effecting the local connections, to so regulate and direct them as to make them parts of a *great system of railroads*, that shall accomplish much greater wants than local convenience; that shall in time tie together with iron bands the industrial interests of our great trans-Mississippi territory.

I propose then, Mr. Mayor, to exhibit to you in the following pages a portion of such a system, that has impressed itself upon me in some years of reflection upon our internal improvements.

Place the map of Texas before you, and beside it a map that will enable you to contemplate the whole area west of the Mississippi, and lying north of the Gulf of Mexico.

I.—The railroad system of the States fronting upon the Mississippi has been pretty well developed. All of them have a direction nearly east and west. None run from north to south.

This is as it should be. The great river furnishes transportation to the Gulf, and the railroads west connect with those east of the river. But when you reach a distance of 300 miles west, there is such a transformation in the character of the country, as to productions, adaptation to white labor, and especially to raising cereals, as to point to a more direct outlet to the Gulf.

II.—Galveston Bay presents the first channel and harbor adapted to the purposes of a great seaport city. It lies about midway between the great river on the east and the desert portions of the Trans-Mississippi.

The belt of habitable and productive agricultural country north of the Western Gulf has a width, east and west, of 500 to 600 miles, and extends, with sides not far from parallel, to the British Territory, some 1400 miles.

A line of railroad from Galveston Bay, due north, would nearly bisect that most splendid region of fertility; and at no point on the line, even to latitude 49° north, would the distance be as short to the Atlantic or the Gulf, by any other practicable route, as that to this terminus, on the Gulf at Galveston.

Such a line would run nearly along the meridian 95° west from Greenwich, or 18° west from Washington. Passing from Galveston, west of the Bay, it would deflect to the west, as already constructed, to Houston, a city whose enterprise and energy have made it the railroad center for the State, despite of many obstacles; it would thence pass somewhat to the east, to regain the line indicated, and to diverge as widely as possible from the Central road, crossing the Trinity somewhere near the Carolina Bluffs, running near to Sumter, Rusk, Tyler; along the line between Hopkins and Titus, Lamar, and Red River; and would cross the Red River about the mouth of the Boggy; thence the line would pass up the Boggy northwest, to flank the mountains called "Seven Devils;" and inclining northeast, cross the Arkansas, at the mouth of the Canadian, and reach the Missouri at the mouth of the Kansas; touching then near St. Joseph, and possibly up the Missouri to the Great Bend about Omaha, it would sweep up through Iowa and Minnesota, along such routes as experience and careful observation should render most eligible.

Such a scheme looks stupendous, but it is no chimera. The northern portion of the road would probably be constructed before the middle was fairly at work, and would meet the Southern progress more than half way. Greater distances are already traversed by rail: *and the construction of this is only a question of time.*

Let us not spoil it by struggles to accommodate towns or neighborhoods; for there is nothing on the line from Houston to Kansas City that deserves a very great deflection of the main line.

III.—Directing attention, however, to Texas, as the subject of our chief interest, and as unquestionably the chief beneficiary of the proposed line of road, however far extended, we first consider the lines of road already adopted and beyond change. A single trunk from Galveston to Houston has one track. Time, and the development of Texas resources, will demand two or more tracks; *and a causeway across the West Bay to connect the island with the main land.*

From Houston the railroad divergence commences, and four other roads, already constructed to some distance, depart from that point and Harrisburg, a few miles below. Assuming the Central Road as the prolongation of the Galveston and Houston Road, there are two roads departing on the left or south-west side, and only one, the New Orleans Road, on the east or right. In fact there is at present no road taking the direction indicated by our proposed line, and although two have been chartered, and long in contemplation, nothing substantial has yet been done in either. I propose to fill this obtuse angle, now unoccupied, by the "GALVESTON, HOUSTON, AND GREAT NORTHERN RAILROAD."

A road having the location I have indicated, will accomplish for Houston and Marshall all they really want, and at the same time, constitute the great artery I have suggested. For the road already constructed from Shreveport to Marshall and extending due west as the Southern Pacific Road, will intersect it somewhere near to Tyler

and not seriously increase the distance her citizens and freight will have to travel. Time and experience would indicate when the shorter route and distance would pay for its construction.

TRAVEL AND TRADE.—It cannot be ignored that the friends of the Marshall route expect the very opposite result from that we most desire, in the construction of the road from Houston by way of Marshall to Shreveport: for the counties hitherto tributary to New Orleans, by way of Red River, would find new facilities for the drainage of their products in that direction. And while this may facilitate the local interests of certain counties and especially certain towns, the prosperity of Texas, as a whole, would not be enhanced.

Whereas, if the proposed route for the Great Northern road should be adopted, the counties of Hunt, Van Zandt, Fannin, Kauffman, Henderson, Lamar, Hopkins, Smith, Wood, Cherokee, Titus, Upshur, Harrison, Rusk, Nacogdoches, and portions of those fronting Red River might be influenced in part or in whole to turn their trade and business association into the great current of trade, thus drifting to the Gulf at Galveston. That this effect would follow will be rendered more probable when we compare the distances and difficulties in the way of getting to New Orleans. The distance from either of the counties named to New Orleans is five hundred miles greater by way of Shreveport and Red River, than to Galveston; and that is only a precarious route, never reliable, more than six months out of the twelve. The trip would, after the completion of the local railroads, be not less than five days to New Orleans, against one day or two at most to Galveston.

The planter or merchant could visit Galveston from Paris in Texas, transact his business, and return to his home, before he could reach New Orleans by Red River, under favorable circumstances. In fact, during half the year, the trip to New Orleans could only be made by way of the Shreveport and Vicksburg Railroad, which would require longer time than by Houston, Orange and Berwick Railroad.

To show that this diversion of travel and trade would be worth seeking, it is but necessary to refer to the census tables:

The population of the 16 counties named, was 134,000 souls in 1860, or more than one-fifth of the entire State of Texas.

Their wealth and the productive character of the country were very great; both these and the population will increase four-fold in the next decade, if we build the roads we have been elaborating.

For example, these sixteen counties had in 1860, a value in live stock of about \$9,000,000. They produced about 778,000 bushels of small grain, and over 5,000,000 bushels of corn, and 96,000 bales of cotton.

If we add to these testimonials of productive wealth and industry, the developments made during the unhappy war, of the manufacturing facilities and the mineral wealth of the district, we shall find ample encouragement for the struggle for the trade of so rich a region. Its transit to any other port is unnatural: and it stands ready like the waters of a mill-dam, whenever the mill-race is open—the gate

of the forebay raised—to rush down into the lap of the sea, at Galveston.

MINERALS.—In contemplating the future patronage of such a railroad we cannot attach too high importance to the great mineral wealth of a portion of this district that will be directly tributary to it. For a belt of iron hills that run from north-east to south-west nearly across the State of Texas, and having a breadth of fifteen to thirty miles, would be crossed by the track of the road in Smith and Cherokee counties. These pass from Davis and Bowie counties on the borders of Arkansas, and cross the Trinity in Anderson and Leon counties; and for one hundred miles length of this road, would discharge their treasures upon its rails.

The iron they bear is of great richness; and upon thorough tests made under my direction, during the Confederate regime, were found to have the highest degree of toughness and malleability. The quantity passes all demands of Texas and her trade, for a thousand years in the future.

The same hills yield the native ochres in unlimited quantities: the sulphate of iron, or crude copperas, also, in ledges and strata, needing but little labor in the mining and bringing to market.

Those hills are forest-covered, chiefly with pines, but the many other timbers needed in the arts and useful as fuel in the furnaces.

The valleys between these hills are fertile, and are supplied with perennial streams of pure water. No portion of the salubrious climates of Texas has better demonstrated its healthfulness than those regions. We hence believe that the day is not distant, should we appreciate our own great wants, to the extent of undertaking a proper outlet for that mineral wealth, when those hills will be populous with engines, machinery, the hum of industry, and manufacturing towns and cities.

Rock.—Along the whole line of the route, after reaching a short distance interior, building rock, both of sandstone and limestone, abounds; and when we reflect that our cities of Galveston and Houston, and even our towns further interior, consume the lime and cement of the far New England States, we perceive an element of wealth in this business alone.

COAL.—The coal of Texas, so far as the route is concerned, is all Lignite, and thus far has not been made very valuable in the arts. We have an abiding faith that these abundant and accessible strata of carbon will yet be reduced to a valuable fuel, and be placed in the market beside the heavier and more perfectly formed coal.

Both Lignite and building rocks abound in the cliffs of the Trinity river, in the vicinity of the crossing.

MATERIALE AND TAP ROADS.—Whenever the main trunk road shall be established, and its construction commenced the neighborhoods making connections will start their enterprises; and the trunk itself would not be completed, before its own sphere of usefulness is nearly doubled, by the aid of lateral roads.

But this need not be elaborated.

EXTENSION OF THE ROAD NORTH OF TEXAS.

As estimated above, the district of habitable and productive country west of the Mississippi river, has a limit on its western verge, nearly north and south; and that limit is not far from longitude 22° west from Washington, or 98° west from Greenwich, from the Rio Grande del Norte to the United States northern boundary at 49°.

Its natural commercial outlet, seaward, is unquestionably through the Gulf of Mexico. And while it will be admitted that water transportation is cheaper than rail, and that much of this region will send its heavy freights by way of the Mississippi's tributaries that flow nearly all at right angles across the belt described, into the father of waters, and by his channel to the gulf; it has been shown by the experience of the past 20 years that rivers are easily robbed of their travel, and a vast proportion of their freights, by any means that warrants expedition; and that railroads and canals have, as they will in the future, drawn after them the freights of the country, despite the best river channels.

For example:

The census tables exhibit the following result of the struggle between the Mississippi and its great tributaries, and the railways and canals eastward, for the freights of the West:

RECEIPTS AT NEW ORLEANS.

	Wheat, aka.	Flour.	Corn, aka.	Oats, aka.
1847	833,649	1,617,675	3,006,086	588,337
1860	13,116	965,890	1,758,131	659,550

This exhibit is the more impressive, when we show the relative amounts of these articles produced, say between 1850 and 1860, in the United States:

	Wheat.	Corn.
1850.....	99,951,012	591,610,931
1860.....	172,034,801	886,404,593

While other products bore like proportions.

The railways and canals have triumphed. Let us furnish railways and canals, shorter by some hundreds of miles, and make reprisals for the gulf, and turn in the southward direction a thousand new sources of productive industry, that such enterprises are sure to call into being.

The route is shorter,—the vicissitudes of surface are gentler,—the climates are milder, and much of the region traversed is infinitely more fertile than those on the routes to the Atlantic.

GENERAL CHARACTER AND TOPOGRAPHY OF THE COUNTRY.

No route yet projected for a railroad has, for the like distance, so uniform and gentle a surface of country. Nearly its whole line may be constructed for a minimum of grading, grades and bridges.

From Houston to Red River will measure about 280 miles; and with the exception of that portion traversing the Iron Hills, the entire distance is undulating, without being abrupt. More than half the distance is timbered; and a large portion of the distance, proba-

bly half, the forest belts abound with timber, valuable and *essential* to the uses of the rich prairies beyond.

INDIAN TERRITORY.

That portion of the Territory west of Arkansas belonging to the Cherokees, Creeks, Seminoles, Choctaws and Chickasaws has an area of about 50,000 square miles, nearly all of it fertile, and most of it *very* fertile country. They express their willingness to grant the right of way for a railroad such as we contemplate. Whether they would grant lands in assistance is not well known.

The industry of the people of that Territory is not very promising; but it is probable that the tempting beauty of the country will invite offers for white colonization and citizenship that the red man will not long refuse, and that the whole country will be developed by Caucasian enterprise that will furnish patronage, in both travel and freights, and in contributions of both land and money, towards their construction.

But with a population of only 65,000 souls, largely decreasing annually, it is not probable that the Indian will long maintain his organized government over an area large enough for millions.

It may safely be relied upon that the Indian Territory west of Arkansas, with its undulating expanses of prairie, and skirts of woodland, and unsurpassed fertility, will contribute vastly to the patronage of the proposed railway.

The distance through the Indian Territory is 220 miles, and, in two-thirds of this entire distance, there need be scarce a deflection, a high grade, or a bridge, except the one across the Arkansas river, that would sensibly swell the cost per mile of the road.

KANSAS AND THE SOUTH-WEST MISSOURI RAILROAD.

The route through this State, Kansas, will pass very near the western border of Missouri, and might require to pass within her limits. The trunk of the South-west Missouri Railroad, (the proper title is not before me,) would be intercepted near the south-west corner of that State. And from this junction down near the north boundary of Texas, and perhaps within her border, the two roads would have a common track.

If it be borne in mind that this is the road likely, first of all northern routes, to command capital for extension beyond the habitable regions of our belt, towards the Pacific, a good reason may be perceived why its tread should be kept within that belt till it approaches the latitude of its destination. For no engineer familiar with the topography of the great Rocky Mountain, Nevada, and coast chains of mountains, would hazard his reputation upon the practicability of constructing and operating at all seasons any of the routes north of the Gila river. This no one knows better than Gen. Fremont, the President of the South-west Missouri Road, who nearly perished in his attempt at an exploration of a route through New Mexico.

and the new State of Colorado. This is named the "Albuquerque route."

Through the hilly portions of the Indian nation—properly the Ozark range—there are distributed the greatest mines of mineral wealth. In fact, this range furnishes a protrusion of an older geological formation, laden with its wealth of iron, lead, zinc, copper, and salines, that constitutes one of the best considerations for the route of the railroad we have proposed. All these, and others, doubtless, which we dream not of, will be developed, and thus invite a dense population, even to that portion of the region deemed the least inviting; for like the iron hills of Texas, the climate is salubrious, the waters pure and transparent, and the valleys productive.

The borders of Kansas and Missouri adjacent abound in the same minerals, and, like this, furnish timber (pines and oaks) in unlimited abundance.

Of the State of Kansas, which measures more than 100,000 square miles, only about 40,000 to 45,000 are embraced in the habitable belt, as described above. In 1860 this area contained 100,000 population, and the past five years have doubled the number. As fast as timber can be grown or transported to her vast prairies, she will develop her unsurpassed fertility and give ample patronage to the railroad to the Gulf. Her rivers, part of the year navigable, will add their contributions, and the railway laterals from the west will develop new channels of industry. Her small-grain crop in 1860 was near 300,000 bushels, and her corn 600,000. Her live stock was worth \$3,500,000, and her slaughtered meats reached half a million head. You may safely double her products for the next census.

MISSOURI.

The Missouri river here is reached by our route at the city of Kansas, and will add with her tributaries above this a thousand miles of the most profitable navigation.

Time, surveys, and experience will teach us where to cross about Kansas City, and whether to keep our direct line along meridian 18° west, or keep up the river on the east side, along a well known and partly constructed line to St. Joseph, where it would intersect the great road from the Mississippi, known as the Hannibal and St. Joseph Railroad.

Having intersected the Great Pacific at or near Kansas, and at this point embraced the road to Omaha, in Nebraska, our "Great Northern Road" reaches the Southern limits of Iowa, with a trade and number of connections that makes it the greatest route of travel and trade in America.

IOWA.

Should the proposed route cross the Missouri below the mouths of the Kansas and the Platte, as would be likely, it would deploy to the eastward, and pass up the divide between the waters of the Platte and the Grand Rivers, and then, bearing slightly westward,

would lie along the crest line between the Sioux passing into the Missouri and the Des Moines passing to eastward into the Mississippi. It would thus reach the northern boundary of Iowa, latitude $43\frac{1}{2}$ north, without a single bridge of any magnitude, and with moderate grades, over a rolling country of great beauty and fertility.

A survey and other considerations might continue this deflection eastward from the southern border, so as to pass the road through the City of Des Moines, the present State Capital, and keep its track between the waters of the Iowa and Des Moines Rivers.

Whatever might be its route, the road would traverse a fertile and already populous region, and must deflect towards the Gulf of Mexico the vast trade it now sends towards the Atlantic by longer routes.

From the point where this track would cross the latitude of New York, say 46 deg. north, the distance to that city, on the Atlantic coast, would be greater by 200 miles than to the Gulf coast at Galveston. And the transit east would be over roads that cost \$30,000 per mile, instead of \$20,000, the probable average cost of the route from Galveston. Besides, the vicissitudes of season in that climate are such as to wear out and deteriorate the roads—the bed, the iron, the bridges and the equipment, at a rate unknown to the Southern latitudes. These considerations must give a great advantage to the road we propose, and, as a consequence, attract to it the capital required for its construction.

MINNESOTA.

From the point where the proposed route would penetrate this border State, on latitude 43 deg. 20 min., to the extreme boundary of the United States' possessions, about the Lake of the Woods, in latitude 49 deg., our information of the topography of the country is much less complete. That portion lying south of Lake Itasca would not differ much from the country already described.

This source of the Mississippi river, the Lake Itasca, lies on the border of the primary formation, and from thence north, the country is more broken and less adapted to agriculture. It is probable, indeed, that for many years it will not require railroads for the transit of its trade. In fact, the climate becomes so rigorous as to forbid a dense population.

But from the Falls of St. Anthony, in fact from the Sauk Rapids, which would not be distant from our proposed route southward, the country will need and demand some such outlet for its trade and productions.

In fact, if the route by way of Des Moines, in Iowa, should be preferred, it is highly probable that the eastward deflection should be continued, and, sweeping up to the Minnesota river, take its valley from the great bend at Mankato, and make the terminus at St. Paul's, near the Falls of St. Anthony.

The rivers of this hyperborean region are liable to low water and to being ice-bound so large a portion of the year, that the early con-

struction of Railroads becomes a necessity. The natural head of navigation, and the centre of a most flourishing agricultural population, with unlimited future promise, would seem an appropriate place for the terminus of the stupendous enterprise we have proposed; and here for the present we would close our self-imposed task.

Having projected a route for a Railroad of not less than 1,000 miles in length, no portion of which is built except that from Galveston to Houston, I respectfully submit it, with the reasons for its construction to your honor, as Mayor of the city at its Gulf terminus; and through you to the reading and thinking men, farmers, planters, merchants, capitalists of the country, as well as to the Legislature of our "Giant State" of Texas.

I remain, very respectfully, Mayor Leonard, your fellow-citizen,
CALEB G. FORSHEY, Civil Engineer.

P. S.—Before completing this memoir, I have had the pleasure to see the proceedings of the Convention from whose deliberations I was debarred by an accident.

Their conclusions have not materially altered my views, which you will perceive were based on wider grounds than the benefit of any special locality. While I shall accept their politeness in placing me on one of the Committees, and co-operate with them in their effort to revive the spirit of internal improvement, I shall hope they will so frame any charter they may apply for, that the stockholders may direct and deflect to the most eligible and profitable line. I think the considerations presented herein when duly weighed ought to have sufficient force to waive local convenience in favor of a great general enterprise.
C. G. FORSHEY.

We find in the *Houston Journal* of a late date a short address to the stockholders of the road by Prof. F., which will be read with interest in this connection. Being called on by the meeting he responded as follows:

Mr. President, the physical geography of a country indicates its great railroad routes. Men of knowledge should be guided by the natural features of the earth's surface, and dispose their great undertakings for internal commerce accordingly. The Trans. Miss. portion of the United States has a belt of habitable country about five or six hundred miles wide and some 1400 miles long, bounded South by the gulf, and North by the British possessions; East by the great river, and West, about longitude 99 deg. West, and nearly parallel to the river, West of this boundary, the American desert lies, several hundred miles in width, and scarcely habitable for the white man. The meridian of 95 deg. west divides this noble Empire of fertility nearly in equal parts, and traverses a country without mountains or even abrupt hills.

It passes between longitude of Galveston and Houston, touches near Rusk and Tyler in Texas, and crosses Red River near the

mouth of the Boggy, the Arkansas at the mouth of the Canadian, the Missouri at the mouth of the Kansas, 150 miles west of St. Paul's in Minnesota. Every portion of the line will some day teem with population; and at every point its distance to the gulf is shorter than to the Atlantic by some hundreds of miles. This is the line which I have delineated as the basis for the construction of the greatest Railway on the Continent. One which shall in time control the commerce of at least half the Eastern side of the belt described, and the whole of the west side, and shall at the same time converge all the local routes along its margins, and arrest the vast commerce and travel from the Rocky Mountain States, west of the desert, and drain into the gulf and its Texas cities, now in their infancy, the wealth of an Empire. This need be no dream. If the men of this age will but appreciate the greatest undeveloped enterprise on earth, ten years may see the first tract of this stupendous work laid down, and the double daily trains plying upon it. If Texians will awake to their great privileges and powers, and the bayonets which now hold their giant powers trembling, uncertain of the future, will permit, they can and they will build their portion of the Road in five years; and the forces and interests now at work beyond, will meet them at the River, by the time they reach that boundary of our State.

How and when can it be done? The times are not propitious for commencing though we have great expectation that they will soon be better. The political prospect up to the time of the late order of Gen. Griffin, abolishing trial by jury of peers, the bulwark of civil liberty for five hundred years were brightening; and we hope will soon be bright again. But all we can do under such circumstances will be to our credit. We can prepare the way, and act as if we knew our powers. Those who can show energy and enterprise under such circumstances, will vindicate their manhood and command the respect of their oppressors. Let us expend but little in the preliminaries till the horizon is brighter.

In the meantime I present you the following scheme for building the Road. Give it a land basis: to effect this,—1st. Appropriate to the survey of two lines twenty miles apart, after thorough digestion of routes, a sufficient sum to make the surveys. 2d. Prepare topographic maps and submit them to the land owners along the routes, and propose conditional subscription of lands, say to the amount of one-half lands within six miles, one-fourth within twelve, one-sixth within eighteen, one-tenth within twenty-four, including unimproved lands only; and let those who subscribe most command the location of the Road. 3d. Locate as soon as possible. 4th. Survey all the lands, and secure deeds, and make maps. Get alternate lots upon a system of survey adopted in advance, and number and color the lots owned by the company. 5th. Upon this showing borrow money, pledging the lands for payment; then put the lands in market as they may be required to pay interest, say twenty years. 6th. Build the road by contract given in each county along the line, to enable the people to make money by working upon it. 8th. Buy your iron

only as you are ready for it, and offer a premium for Texas iron. 9th. Establish car manufactories along the line, and offer inducements to domestic manufactures, and commence work at several points, at the same time give assurance of early completion. Let the spade and the axe and the hammer be plying from the beginning to the end of the line as soon as the survey can be made. I submit in this outline the considerations that influenced me in the original delineation of this route, and the scheme by which I think it may be promptly built.

ART. VII.—DEPARTMENT OF COMMERCE.

1.—COTTON AND THE COTTON TRADE.

THE close of the commercial year in the United States, on the 31st of August, will furnish us with an immense amount of statistics for this and succeeding numbers of the REVIEW. At present our sources of information will not enable us to make up complete estimates, but we annex the report of the New York *Financial Chronicle*, which shows the receipts and exports to latest dates:

RECEIPTS AND EXPORTS OF COTTON (BALES) SINCE SEPT. 1, AND STOCKS AT DATES MENTIONED.

PORTS.	Received since Sept. 1.	EXPORTED SINCE SEPT. 1 TO—				Ship-ments to North'n Ports.	Stock.
		Great Britain.	France.	Other For'gn.	Total.		
New Orleans, Aug. 23	712,002	408,521	160,852	54,505	618,873	245,637	16,978
Mobile, Aug. 23	230,149	145,543	4,352	3,506	153,401	61,323	3,850
Charleston, Aug. 23	157,798	75,547	3,524	1,825	80,896	87,397	685
Savannah, Aug. 23	229,262	108,592	959	.....	109,551	122,320	1,663
Texas, Aug. 16	178,927	59,343	.....	9,897	68,939	90,932	4,599
New York, Aug. 30*	119,601	374,342	23,460	65,858	468,660	.....	43,000
Florida, Aug. 23†	57,557	3,091	.....	.....	3,019	40,689	143
North Carolina, Aug. 30	33,163	534	.....	.....	534	37,630	.....
Virginia, Aug. 30	105,223	13,011	.....	.....	13,011	91,855	.....
Other ports, Aug. 30*	33,114	27,552	.....	418	28,270	.....	115,000
Total	1,871,896	1,211,303	198,147	125,809	1,545,549	737,713	99,910

We have just received the issue of the same valuable journal for September 7th, which contains the following remarks on the cotton business:

There is a quite a large decrease in the receipts of cotton this week from all ports, the total reaching only 5,130 bales (against 6,715 bales last week, 6,161 bales the previous week, and 6,830 bales three weeks since.) As the new crop is now beginning to arrive we may expect soon to see the receipts of the ports gradually increase. The exports from all ports continue extremely small, the total for the week amounting to only 1,579 bales, against 2,110 bales last week and 1,902 bales the previous week. For the corresponding week in 1866 the shipments of cotton from all the ports amounted to 20,400 bales. The total foreign exports from the United States since

* The receipts given for these ports are only the shipments from Tennessee, Kentucky, &c., not otherwise enumerated.

† These are the receipts at all the ports of Florida to August 3, except Apalachicola, which are only to July 26.

‡ Estimated. The stock at New York is also estimated.

September 1st are now 1,546,738 bales, against 1,550,000 bales for the same period last year, and the stocks at all the ports reach only 74,460 bales, against 281,179 bales at the same time in 1866.

The total receipts for the commercial year may be placed in round numbers at 1,875,000 bales. The exports to foreign countries show a slight decrease from last year. We commence the new cotton year with a very light stock on hand, say 75,000 bales against 281,079 bales same time last year, but this difference will be more than made up by the prospect of a larger crop than was produced in 1866-'67.

Estimates as to the growing crop are very cautiously advanced, the data at hand being by no means reliable, and accounts from the South-west of extensive disasters from rain and the worm needing confirmation. It is now said that the appearance of a species of insect known as the "ichneumon fly," has filled the hearts of the South-western sufferers with renewed hope and gladness, as it is known to be a merciless and unrelenting enemy to the cotton-worm and will doubtless soon exterminate them. The thoughtful writer of the annual statement for the New Orleans *Price Current* says on the subject of the growing crop:

As usual at this period of the year conflicting estimates are made of the maturing crop. While there is no reliable data for calculation, which may not be entirely overthrown or greatly modified by later developments, some parties have no lack of figures to prove the reasonableness of their conclusions. Others arrive at a result by a much shorter and less laborious process. There is, however, a public opinion in relation to this matter, which is entitled to a certain degree of consideration. Referring to this, we find that the prevailing impression in our cotton circles is that the crop will be from 2 to 2½ millions of bales. Both factors and buyers who wish to be regarded as moderate in their views, lean to the average. The firm believers in the ravages of the worms on the uplands as well as on the delta of the Mississippi, regard two millions as an extreme outside rate. The skeptics on the other hand say that the Liverpool estimate-makers who predict three millions are more nearly correct. As moderate men we are inclined to fall in with those who predict 2½ millions, but have no more intelligence from the country than others to impart to our view any particular weight. The worms have not yet completed their work; the diminution from overflows is not yet determined; the vicissitudes of the fall season have not yet been met; nor, on the other hand, is it definitely known how much greater breadth of land has been planted. The whole matter is involved in uncertainty and estimates, from whomever they come, should be distrusted accordingly.

The first receipt of new crop consisted of five sacks in the seed which was sent up from the lower coast to be ginned here and came to hand on the 13th of August; but the first merchantable from the Mississippi valley was one from the plantation of Mr. Victor Meyer, Concordia Parish, which was received on the 19th. In the interim one bale had been received, *via* Mobile, from Lowndes Co., Alabama. The receipts of new crop to date are only 19 bales against 123 last year.

Some of the drawbacks to the successful production of cotton with free negro labor are briefly noted in the extracts below, which we take from the *New York World*:

The following is part of a letter just received from a gentleman who went last year to engage in a planting enterprise in Northern Mississippi. It shows the practical workings of Reconstruction so far; and, as the report of a suffering eye-witness, we lay it before our readers:

"HORN LAKE, De Soto county, Miss.,
August 17, 1867. }

"Our crop is above an average in North Mississippi, corn good on fresh land, but all lands here that have been long under the plough are spotted with galled and washed places, consequently the yield is irregular. Our cotton lacks a third to make perfect stand, but is limbing and bolling well. The army worm is devouring fields within three miles of ours, and is advancing this way. We had stock, implements, supplies, labor—all to buy at high rates. The growing crop will probably sell here for about twenty cents per pound, consequently if I get my money back, with loss of my own labor, it is all I can expect. No farmer here presumes on any profit, and those who rent will sustain actual loss this year, as they did last.

"Renters are now convinced there is no money in growing cotton with freedmen's labor, and land-holders are anxious to sell, but there are no buyers. No one has money but the few who speculated during the war under Federal favor. We expect the nigger to rule the cotton States, and don't want to stay to see it. They are so full of politics they won't half work, all waiting for office and land, as the Radicals have promised those who vote their ticket. As I look at the probabilities I see in the immediate future and Radical and negro legislation in all these States, giving to the latter at least a part of their former masters' land, and swaying the balance of political power at their will. Our best men and truest patriots take this view of the situation. Add to this the probability, nay, almost the certainty, that we are to be taxed our last dollar, with the expected crash of the national banks and the worthlessness of paper currency, and who would be cheerful and content? Who would not prepare to stand from under?

"There are as yet but few subdivisions of large farms. When the owners offer to sell it is either all in bulk or some worn-out corner without soil, timber, or buildings.

"Everybody is in debt, both on old scores before the war and for supplies since, vainly hoping and promising to pay out with 'next cotton crop'; and this chimera has as yet only served to mire them the deeper. This picture is a photograph of affairs in Mississippi, Alabama, and West Tennessee. True, the present grain crop has lifted us somewhat above the starving point, but how can there be a future for us while knaves hold the government purse, and Radical satraps suspend their swords over our heads?

"Yours, fraternally,

W. LYMAN."

In our notes on cotton for our last issue, we alluded briefly to the appearance of the caterpillar in the Sea Islands of South Carolina, but expressed a hope that the energetic measures adopted for their destruction, and the forwardness of the plant, would save the crop. We regret to say that late advices have convinced us that our hopes were not well founded. The mischief already done is irreparable, and at last accounts the work of ruin was daily increasing. This is a sad result to those whose hopes of future prosperity rested so confidently upon the promise of a good yield this year.

We curtail our notes on cotton this month to make room for the very full statistics of the commerce of New Orleans, which follow:

2.—COMMERCE OF NEW ORLEANS.

The superior facilities enjoyed by the New Orleans *Price Current* in collecting necessary data, induces us now, as for twenty years past, to adopt its figures, touching the commerce of that city, as far more reliable than the records kept in our office. We condense from its able and elaborate annual statement the following statistics for the commercial year just ended, which are as complete and reliable as intelligence, system and industry could make them:

**RECEIPTS FROM THE INTERIOR IN THE YEAR ENDING ON THE 31st
AUGUST.**

ARTICLES.	1866-7.	1865-6.	1864-5.	ARTICLES.	1866-7.	1865-6.	1864-5.
Apples, bbls.	88,394	69,532	67,416	Lead, tcs. & bbls.	32,377	31,272	65,784
Bacon, asst. cks. &c. 3,685	16,243	16,243	45,015	Lead, kegs.	48,758	27,013	90,690
Bacon, bbls. & bxs. 5,281	2,259	2,259	5,997	Lime, west'n, bbls.	62,097	63,926	33,143
Bacon Hams, hhd. 25,363	14,307	87,814	37,814	Lead, pigs.	504	370	80,964
Bacon in bulk, lbs. 97,000	17,740	39,000	39,000	Lead, bar, kegs.	514	186	1,656
Bagging, pieces.	847	3,842	21,427	Molasses, bbls.	28,747	27,403	213,940
Bale Rope, coils.	25,108	43,940	126,422	Oats, bbls. & s'ks.	576,567	681,422	659,550
Beans, bbls.	3,825	6,312	8,329	Onions, bbls.	26,640	38,513	36,401
Butter, kegs.	23,730	16,909	38,345	Oil, Lard, bbls.	888	1,289	9,333
Butter, bbls.	872	610	1,506	Potatoes, bbls.	221,742	255,713	907,696
Bras, sacks.	317,108	191,474	274,277	Pork, tcs. & bbls.	159,519	76,947	216,523
Beef, bbls. & tcs.	8,398	8,403	44,934	Pork, hhd.	1,168	716	1,874
Beef, dried, lbs.	5,750	4,300	93,726	Pork in bulk, lbs.	948,350	271,140	3,808,500
Cotton, bales.	789,490	787,066	2,253,445	Porter & Ale, bbls.	22,088	19,881	20,949
Corn in ears, bbls.	296	27,289	96,092	Packing Yarn, reels.	1,036	665	3,743
Corn, sh'd, s'ks. 3,709,635	2,003,176	1,722,039	.....	Skins, Deer, packs.	114	98	1,542
Cotton Seed, s'ks. 177,353	94,173	85,983	.....	Shot, kegs.	1,983	2,326	4,001
Cheese, boxes.	65,067	55,273	85,983	Sugar, hhd.	23,524	17,595	195,185
Candles, boxes.	71,797	64,210	110,405	Sugar, bbls.	757	919	4,808
Coal, wet'n, bbls. 3,123,510	1,265,915	2,900,000	.....	Soap, boxes.	6,069	5,121	12,302
Dr'd Apples, &c. bbls. 1,500	148	70	.....	Shingles, M.	3,115	1,588	7,000
Flaxseed, tierces.	84	10	1,121	Staves, M.	2,790	2,510	10,178
Flour, bbls.	922,105	993,321	974,340	Tallow, bbls.	638	412	1,025
Feathers, bags.	405	141	936	Tobacco, le'f, hhd.	11,003	15,412	80,955
Glassware, boxes.	16,435	5,340	68,879	Tobacco, chw. bxs.	30,320	28,411	14,544
Hemp, bales.	1,220	856	4,833	Tobacco, bales.	170	90	274
Hides.	106,975	76,490	163,568	Twine, bundles.	2,404	1,541	2,508
Hay, bales.	148,546	129,121	152,639	Whisky, bbls.	37,500	53,916	185,042
Iron, Pig, tons.	8,060	1,963	643	Wheat, sacks.	505	636	13,116
Leather, bundles.	7,686	7,329	6,115				

TABLE showing the quotations for Middling Cotton at the close of each month with the rate of Gold, and Sterling bills, at same date.

1866-7.	Middling. Cts. per pound.	Sterling. Per cent.	Gold. Per dollar.
August.....	35 a 36	152 a 158	145½ a —
September.....	nominal	155 a 156	142½ a 143
October.....	37 a 38	156 a 160	147 a 148
November.....	— a 33	152 a 152½	— a 140½
December.....	— a 33½	143 a 144	132½ a 132½
Jan. 1866.....	32 a 32½	144½ a —	134½ a —
Feb. ".....	— a 30½	148½ a 149½	138½ a 139
Mar. ".....	29½ a 30	145 a 145½	134½ a —
April, ".....	28 a 29	146 a 146½	135½ a —
May, ".....	26 a —	147 a 148½	136½ a 136½
June, ".....	26 a —	149 a 152½	138 a 138½
July, ".....	27 a 27½	152½ a 155	140 a 140½
Aug. ".....	— a 28½	153 a 155½	141 a —

TABLE showing the highest and lowest point in each month, for Low Middling to Middling Cotton.

1866-7.	Highest.	Lowest.
September.....	37 a 38	31 a 32
October.....	41 a 42	35 a 36
November.....	— a 38½	31 a 32
December.....	— a 33	29 a 30
January, 1866.....	— a 33½	31 a —
February, ".....	31½ a 32	29½ a —
March, ".....	31 a 31½	28½ a —
April, ".....	29½ a 30	22 a —
May, ".....	28 a 29	23 a 24
June, ".....	— a 27	24 a —
July, ".....	27 a 27½	22½ a 23½
August, ".....	— a 28½	— a 25

TABLE showing the total product of Cotton, with the receipts at New Orleans, and the total crop of each year.

	Total Crop. Bales.	Rec'd at N. Orleans. Bales.	Average Price. Cts. per lb.
1857-58	3,113,963	1,678,616	11½
1858-59	3,851,481	1,774,298	11½
1859-60	4,675,770	2,255,448	10½
1860-61	3,699,926	1,849,312	11
1861-62	*3,900,000	38,880	10
1862-63		22,078	55½
1863-64		131,044	85
1864-65	500,000	271,015	69½
1865-66	estimate... 890,000	787,386	39½
1866-67	estimate... 1,700,000	780,490	27½

Season.	Rec'd at N. Orleans. Bales.	Average Price per Bale.	Total Value.
1855-56	1,759,298	\$40 00	\$70,371,720
1856-57	1,513,247	57 00	86,255,079
1857-58	1,678,616	52 50	88,137,340
1858-59	1,774,298	53 00	92,037,704
1859-60	2,225,448	48 50	69,389,228
1860-61	1,849,312	50 00	192,465,600
1861-62	38,880	45 00	1,769,040
1862-63	22,078	231 32	5,107,082
1863-64	131,044	356 20	46,677,872
1864-65	271,015	270 54	73,320,398
1865-66	787,386	178 20	140,313,185
1866-67	780,490	125 10	97,639,299

Total 12 years... 13,040,997..... \$955,046,609

Date of Receipt of First Bales.	Receipts of New Crop to Sept. 1.	Total Receipts at New Orleans.	Total Crop.
1855—July 20	23,282	1855-56.. 1,759,298	3,527,845
1856—July 15	1,166	1856-57.. 1,513,247	2,939,519
1857—Aug. 15	33	1857-58.. 1,678,616	3,113,962
1858—July 25	4,824	1858-59.. 1,774,298	3,851,481
1859—July 28	9,698	1859-60.. 2,255,448	4,675,770
1860—July 5	38,670	1860-61.. 1,849,312	3,699,926
1861—Aug. 11	61	1861-62.. 38,880	*3,900,000
1862—		1862-63.. 22,078	
1863—Sept. 7		1863-64.. 131,440	
1864—Aug. 14	13	1864-65.. 271,015	500,000
1865—Aug. 11	22	1865-66.. 787,386	800,000
1866—Aug. 7	123	1866-67.. 780,490	1,700,000
1867—Aug. 15	19		estimate.

3.—SUGAR TRADE AND PROSPECTS.

The thoughts and suggestions of the *Price Current* on this important culture are so exceedingly well-timed, so dispassionate and so well digested, that we regret we have not space enough to present them, to our Northern read-

* These figures include, as near as possible, only cotton which really came to this market, or was taken for home consumption.

ers especially, in full. We, however, give a brief synopsis and a few extracts to which we crave attention.

After referring to the serious drawbacks which meet the planter at every turn, the disastrous overflows, the inefficient labor, the scarcity of food, and the burden of taxation, all of which tended to defeat the extensive preparations made at the commencement of the season for a much wider and more energetic culture, the editors yet see room and cause for congratulation in the general results, as showing, despite all obstacles, a steady though slow revival of this branch of industry. The crop of 1867 it is hoped will reach 75,000 hhds. against 10,397 in 1864, 14,709 in 1865 and 39,000 in 1866.

After alluding to the refusal of the freedmen to give a few hours of earnest extra labor at critical periods, when a hearty rally would restore the promise of the crop, imperilled by too much heat or moisture, the writer urges the importation of coolies as calculated to create a healthy emulation and competition, and then goes on to say:

We have said that since the restoration of peace the sugar culture has revived, and it is of some interest to notice its gradual progress. In 1861 we made a crop of 459,410 hhds., weighing 528,321,500 lbs., and valued at \$25,095,271. This was the largest yield ever gathered in the State. Large as it was, however, it had suffered from some of the vicissitudes to which the culture is exposed; and it was estimated that with a concurrence of auspicious weather and other favoring influences, we could then, with our sugar lands in cultivation, and our actual machinery and force, make fully 500,000 hhds. But so precarious is the culture, that it was at the same time admitted that a combination of untoward circumstances might at any time reduce the year's yield to 100,000. The capital then invested in this branch of production embraced about \$58,000,000 in boiling houses, rolling mills, steam engines, sugar apparatus, stables, barns, negro quarters, &c.; \$13,000,000 in rolling stock, mules, oxen, wagons, carts, &c.; \$100,000,000 in slave property; and \$25,000,000 in sugar lands. This makes a total of \$194,000,000. The proprietary value in the slave property has been destroyed. If the same number of working hands remained, and they were willing to give as much labor for wages as they formerly did from necessity, this loss by the proprietors would have its corresponding gain on the part of the negroes, and the result to the State would be the same. The productive labor power would be undiminished. Unfortunately such is not the case. The number of negroes was considerably diminished during the war, and has been more reduced since by the general demoralization. Those who survive are unwilling to labor as they did formerly. The women have abandoned the field; the children are no longer employed in the light but useful tasks which they once cheerfully performed—tasks, we may add, not one-fourth as heavy as those imposed upon children of similar age in some of the factories of the North and nearly all those of England; and the workmen persistently refuse to labor more than their regular hours, and habitually neglect their tasks on all possible occasions. There may be some exceptions to these remarks. In a few cases, where the freedmen have an interest in the crop, have had no other advisers than their old masters—their best friends—and have been uncorrupted by political missionaries or the prowling emissaries of mischief and anarchy, they have been inspired by a laudable ambition to earn a sufficient surplus to enable them, with the earnings of a year or two more, to purchase a homestead for themselves, raise their own corn, sweet potatoes, poultry and hogs, and a fair patch of cane to be ground at their own master's mill. These exceptions, we are sorry to say, are rare. Had the government of the negroes been placed on the same footing as the government of the whites, their mutual relations would have been easily

settled by the planters and the laborers. Each interested in the welfare of the other, there would have been harmony between them; production would have been undiminished, excepting from the loss of numbers; the loss of numbers would have been less, because there would have been less demoralization; the freedmen would have rapidly accumulated small capitals from their labor; and the mass would, in a few years, have occupied a similar position to the small farmers of the Northern States. This has all been defeated by the mischief-making of such persons as those that Major General Sheridan stigmatized as "bad men." The negroes have been falsely taught that the planters were opposed to them, that to work in extra hours was returning to a state of slavery, that they should contribute freely to political organizations, which prevents savings, that the planters' lands would eventually be confiscated and distributed among them, and that in the good time coming every field hand would own a plantation, house, and his wife be a planter's lady. This statement may seem ludicrous to our readers at a distance, and be discredited as exaggerated, but our home subscribers can confirm its truth. It is only recently that the Vicksburg papers chronicled the arrival of a host of country freedmen, who came to town to share in the division of mules among them which it had been reported was to be made by the Government from the spoils of the neighboring plantations.

From the above it will be correctly inferred that the productive labor power of the sugar-growing districts of Louisiana has been greatly diminished by demoralization among the freedmen, as well as by diminution of the numbers. Hence it would be hardly fair to count on more than half the labor power we had before the war. No one can reflect on this fact without the conclusion that it would be for the public welfare, as well as for individual interests, to encourage and not prohibit the immigration of suitable laborers, to increase the productive power of the State, add to individual and national wealth, and augment the revenues of the Federal Government.

To this loss of labor power we must add the destruction of capital in the immense number of sugar houses, machinery, &c., destroyed during the war. The total value of those previously in operation we have set down at \$69,000,000. The lands, estimated as worth \$25,000,000, are reduced to one-third their former value, but they still remain subject to cultivation, if means can be provided to protect them from overflows. But the loss of sugar houses, machinery, &c., is absolute, and can only be repaired by new capital. It is manifest that this cannot be furnished at the South, and unless it can be brought from the North or from Europe, there can be no just hope of restoring the culture even to the measure of the labor power, or to the production of a crop of 230,000 hogsheads, the half of the yield of 1861. We have no expectation that this will be effected, but still we have reason to hope that the culture will afford sufficient inducements to invite a large amount of capital, as soon as the subject is correctly understood. Young and enterprising Northerners or Europeans should consider that, though in swampy districts, these sugar lands are not sickly. On the contrary many of them are distinguished for their salubrity. In this particular, they are far preferable to the new lands in the West. Perpetually fanned by the refreshing breezes of the gulf, the successful sugar planter may enjoy, amidst the shade of his evergreen orange groves, as much enjoyment and comfort as can be anywhere offered by country life. The whole South invites capital and welcomes the immigrant, but in perhaps no other section can he who has capital invest it more to his satisfaction than in our Louisiana sugar lands.

The following shows the gradual recuperation since the great crop year of 1863:

	1861.	1864.	1865.	1866.
Number of plantations . . .	1,291.....	175.....	189.....	847
Crop, hogsheads	459,410.....	6,668.....	14,790.....	39,000

To be more specific, we give the following details, according to parishes:

NUMBER OF PLANTATIONS.

Parishes.	1866-7.	1865-6.	1864-5.	1861-2.
Orleans	2	3	1	5
St. Bernard	9	8	7	19
Plaquemine	33	31	29	42
Terrebonne	32	21	21	88
Assumption	58	28	91	154
Lafourche	40	12	7	76
St. Charles	8	1	5	84
St. John the Baptist	14	6	4	64
St. James	52	21	13	98
Ascension	23	20	19	58
Iberville	31	21	23	121
Jefferson	11	6	8	25
St. Mary	7	1	2	169
Point Coupée	—	1	1	59
West Baton Rouge	2	1	1	54
East Baton Rouge	2	1	3	39
Rapides	—	6	—	35
Avoyelles	—	—	—	19
West Feliciana	—	—	—	13
East Feliciana	—	—	—	4
St. Martin	4	—	—	71
Vermillion	1	—	—	8
Lafayette	—	—	—	6
St. Landry	—	—	—	39
	329	188	175	1,201

The following gives the crops from the several parishes, as above:

CROPS.

Parishes.	1866-7.	1865-6.	1864-5.	1861-2.
Orleans and St. Bernard	1,211	1,024	387	8,430
Plaquemines	6,509	4,217	2,301	23,438
Terrebonne	4,191	1,474	426	23,839
Assumption	5,999	1,391	881	37,766
Lafourche Interior	3,150	407	118	29,781
Ascension	2,709	1,839	1,285	80,721
Iberville	2,158	420	429	41,923
Jefferson	2,067	704	303	11,086
St. James	4,795	965	262	34,224
St. Charles	1,466	21	73	18,191
St. John Baptist	1,275	396	43	18,843
Rapides	—	795	—	19,571
Point Coupée	—	60	4	23,665
West Baton Rouge	125	60	35	24,697
East Baton Rouge	388	—	60	10,949
St. Mary	560	—	61	48,799
St. Martin	98	150	—	16,088
St. Landry	—	—	—	7,983
Vermillion	75	—	—	907
Lafayette	—	—	—	1,348
Avoyelles	—	—	—	6,121
West Feliciana	—	—	—	5,712
East Feliciana	—	—	—	716
Cistern bottoms of 389,264 hhds. at an estimate of 3 per cent	—	—	—	11,677
Scattering crops of which we have no returns	2,333	—	—	746
Total crops	39,000	14,709	6,668	459,410

The following shows the monthly sales and receipts compared with the movement last year:

	Sales.		Receipts.	
	1886-7.	1885-6.	1886-7.	1885-6.
September.....	100.....	950.....	221.....	701
October.....	200.....	1,000.....	92.....	1,685
November.....	3,400.....	900.....	4,296.....	1,258
December.....	11,000.....	2,500.....	11,977.....	2,906
January.....	14,000.....	4,750.....	14,092.....	4,334
February.....	6,400.....	2,850.....	4,817.....	3,111
March.....	2,000.....	1,500.....	1,520.....	1,899
April.....	1,200.....	600.....	885.....	648
May.....	600.....	575.....	392.....	974
June.....	500.....	350.....	164.....	319
July.....	200.....	200.....	26.....	175
August.....	100.....	40.....	42.....	85
	89,700	16,215	38,524	17,995

PROGRESS OF SUGAR CULTURE AND VALUE OF CROPS FOR 33 YEARS.

Year.	TOTAL CROP.		Av. price per hhd.	Total Value.
	Hhds.	Pounds.		
1838 to 1833...	281,000...	281,000,000...	—	—
1834.....	100,000...	100,000,000...	60 00...	6,000,000
1835.....	30,000...	30,000,000...	90 00...	2,700,000
1836.....	70,000...	70,000,000...	60 00...	4,200,000
1837.....	65,000...	65,000,000...	62 50...	5,062,500
1838.....	70,000...	70,000,000...	62 50...	4,375,000
1839.....	115,000...	115,000,000...	50 00...	5,750,000
1840.....	87,000...	87,000,000...	55 00...	4,785,000
1841.....	90,000...	90,000,000...	40 00...	3,600,000
1842.....	140,000...	140,000,000...	42 50...	4,750,000
1843.....	100,000...	100,000,000...	60 00...	6,000,000
1844.....	200,000...	200,000,000...	45 00...	9,000,000
1845.....	186,650...	186,650,000...	55 00...	10,265,750
1846.....	140,000...	140,000,000...	70 00...	9,800,000
1847.....	240,000...	240,000,000...	40 00...	9,600,000
1848.....	220,000...	220,000,000...	40 00...	8,800,000
1849.....	247,923...	249,769,000...	50 00...	12,396,150
1850.....	211,303...	231,194,000...	60 00...	12,678,180
1851.....	236,547...	257,138,000...	50 00...	11,827,350
1852.....	321,931...	368,129,000...	48 00...	15,452,688
1853.....	449,324...	495,156,000...	35 00...	15,726,340
1854.....	346,635...	385,726,000...	52 00...	18,025,020
1855.....	231,427...	254,569,000...	70 00...	18,199,890
1856.....	73,976...	81,373,000...	110 00...	8,137,260
1857.....	279,697...	309,666,700...	64 00...	17,900,880
1858.....	362,296...	414,796,000...	69 00...	24,998,424
1859.....	221,840...	255,115,750...	82 00...	18,190,880
1860.....	228,753...	963,065,000...	68 25...	14,468,627
1861.....	459,410...	528,321,500...	54 62...	25,095,271
1862.....	87,231...	95,954,100...	85 84...	7,749,602
1863.....	76,801...	84,481,100...	179 70...	13,801,139
1864.....	10,387...	10,780,000...	203 50...	1,994,300
1865.....	18,079...	19,888,900...	157 50...	2,847,442
1866.....	38,675...	42,643,500...	197 50...	5,317,812
Total.....	5,873,065	6,320,001,550		\$316,065,718

VALUE OF PRODUCE OF THE INTERIOR.

A TABLE showing the receipts of the principal articles from the Interior, during the year ending 31st August, 1867, with their estimated average and total value.

ARTICLES.	1866-7.		
	Amount.	Av. Price.	Value.
Alcohol, bbls.	815	\$180 00	\$146,700
Apples, bbls.	86,334	5 95	513,687
Bacon, sds & shlds, hdds & cks.	35,688	138 75	491,710
Bacon, sds & shlds, boxes	5,231	41 63	217,714
Bacon Hams, bbls & tes.	25,263	125 66	3,174,548
Bacon in bulk, lbs.	97,000	14	13,580
Bagging, pieces.	6,847	40 00	273,880
Bale Rope, coils.	25,193	14 28	319,756
Beans, bbls.	3,825	11 50	43,987
Butter, kegs and firkins.	23,720	21 75	515,910
Butter, bbls.	372	60 00	22,320
Bran, sacks.	218,002	1 85	403,303
Beef, bbls.	7,117	18 50	131,664
Beef, tierces.	1,281	27 75	35,547
Beef, dried, lbs.	5,750	16	920
Cotton, bales.	780,490	125 10	97,639,200
Cotton Seed, sacks.	177,352	55	97,543
Corn Meal, bbls.	46,733	5 50	256,976
Corn in ear, bbls.	296	1 75	518
Corn, shelled, sacks.	3,709,625	2 90	7,857,912
Cheese, boxes.	65,067	8 45	549,816
Candles, boxes.	71,737	8 00	573,896
Coal, western, bbls.	3,123,510	70	2,186,457
Dried Apples & Peaches, bbls.	1,506	15 95	24,020
Eggs, bbls.	17,885	23 75	424,768
Feathers, bags.	405	32 00	12,960
Flaxseed, tierces.	84	16 90	1,419
Flour, bbls.	923,125	13 00	11,987,625
Glassware, packages.	16,435	6 50	106,827
Hemp, bales.	1,220	90 00	109,800
Hides.	106,975	2 60	278,135
Hay, bales.	148,546	5 00	742,730
Horns.	15,850	6	951
Iron, pig, tons.	3,060	43 80	134,028
Lard, bbls and tes.	32,377	42 75	1,384,116
Lard, kegs.	48,758	6 20	302,299
Leather, bundles.	7,686	45 00	345,870
Lime, Western, bbls.	62,697	2 10	131,663
Lead, pigs.	500	8 75	4,410
Lead, bar, kegs & boxes.	512	30 50	15,677
Lead, White, kegs.	2,321	8 00	18,568
Molasses, galls.	2,342,880	65	1,522,872
Oats, sacks.	576,567	3 15	1,816,186
Onions, bbls.	26,640	4 95	131,868
Oil, Linseed, bbls.	—	—	—
Oil, Castor, bbls.	5	130 00	650
Oil, Lard, bbls.	386	55 00	21,230
Oil Cake, tons.	299	35 00	10,465
Potatoes, bbls.	231,742	3 75	881,532
Pork, tes & bbls.	159,519	26 50	227,253

1866-7.

ARTICLES.	Amount.	Av. Price.	Value.
Pork, boxes	111.....	\$17 20.....	\$1,900
Pork, hhds.	1,168.....	132 50.....	154,760
Pork in bulk, lbs.	48,350.....	13½.....	6,406
Porter & Ale, bbls.	22,238.....	20 60.....	444,760
Packing Yarn, reels.	1,026.....	12 35.....	12,671
Pickles, bbls & kegs.	276.....	9 15.....	2,525
Rice, sacks	24,914.....	10 50.....	261,597
Rosin, bbls.	6,493.....	5 15.....	33,488
Rum, bbls.	7.....	50 00.....	350
Skins, Deer, packs.	114.....	100 00.....	1,100
Shot, kegs.	1,983.....	3 45.....	6,841
Soap, boxes.	6,069.....	4 75.....	28,827
Spirits Turpentine, bbls.	4,580.....	24 70.....	113,126
Staves, M.	2,790.....	112 50.....	313,875
Shingles, M.	3,115.....	6 15.....	19,157
Sugar, hhds.	38,675.....	137 50.....	5,317,812
Spanish Moss, bales.	5,350.....	20 00.....	107,000
Tallow, bbls.	638.....	38 06.....	24,283
Tobacco, Leaf, hhds.	12,107.....	180 00.....	2,179,260
Tobacco, Strips, hhds. ....	.....	.....	.....
Tobacco, Stems, hhds. ....	.....	.....	.....
Tobacco, bales.	170.....	19 50.....	3,315
Tobacco, Chewing, kgs & bxs.	30,330.....	105 00.....	3,184,650
Twine, bbls & bxs.	404.....	14 00.....	5,656
Vinegar, bbls.	1,876.....	9 60.....	18,009
Wool, bags.	2,919.....	55 20.....	161,078
Whiskey, bbls.	37,590.....	90 00.....	3,383,100
Wheat, sacks	505.....	.....	2,500
Other various articles, estimated at .....	.....	.....	8,000,000
Total value .....	.....	.....	\$168,343,569

Total in 1864-65.....	\$113,640,280
Total in 1863-64	79,233,985
Total in 1862-63.....	29,766,454
Total in 1861-62.....	51,510,990
Total in 1860-61.....	155,863,564
Total in 1859-60.....	185,211,254

Comparative Arrivals, Exports and Stocks of Cotton and Tobacco at New Orleans for ten years—from 1st September each year.

Years.	COTTON—BALES.			TOBACCO—HHDS.		
	Arrivals.	Exports.	Stock.	Arrivals.	Exports.	Stock.
1866-67....	730,400...	867,316...	15,256...	12,107...	16,390...	3,191
1865-66....	787,386...	769,543...	102,082...	15,412...	6,921...	8,407
1864-65....	371,015...	192,351...	88,239...	2,410...	1,831...	873
1863-64....	131,044...	128,130...	4,575...	1,363...	797...	594
1862-63....	22,078...	23,750...	.....	155...	12,556...	311
1861-62....	38,880...	27,678...	120...	1,063...	2,224...	12,711
1860-61....	1,849,312...	1,915,852...	10,118...	34,892...	39,806...	15,120
1859-60....	2,255,448...	2,214,206...	73,934...	80,955...	82,689...	20,635
1858-59....	1,774,298...	1,777,171...	26,022...	75,925...	79,974...	23,369
1857-58....	1,678,618...	1,659,707...	30,230...	87,141...	72,215...	28,418

Comparative Prices of Middling Cotton at New Orleans on the first day of each month during a period of five years.

	1866-7. Cents.	1865-6. Cents.	1864-5. Cents.	1863-4. Cents.	1862-3. Cents.
Sept.....	34 a 35	42 a —	— a —	— a —	— a —
Oct.....	41 a 42	44 a 45	161 a 163	62 a 68	— a —
Nov.....	37 a 38	55 a 56	119 a 120	65 a 73	— a 64
Dec.....	33 a —	50 a 51	137 a 138	71 a 72	— a 54½
Jan.....	33½ a —	— a 51	118 a 120	72 a 73	— a 53
Feb.....	31½ a —	48 a 49	68 a 70	76 a 77	— a 62
March.....	31 a 31½	— a 46	— a 75	72 a 73	— a 80
April.....	29½ a 30	40 a 41	— a —	— a 70	— a 72
May.....	28 a 29	36 a —	35 a 36	82 a 83	— a 60
June.....	26 a —	38 a 39	42 a 43	93 a 93	— a —
July.....	26 a —	36 a 38	40 a —	— a 160	— a —
August.....	27 a 27½	— a —	42 a 44	160 a 163	— a 53

	1866-7. Bales.	1865-6. Bales.	1864-5. Bales.	1863-4. Bales.	1862-3. Bales.
Receipts at N. Orleans....	780,490	787,386	271,015	131,004	22,078
Crop.....	1,700,000	800,000	500,000	—	—

Comparative Statement of the Receipts, Exports and Stocks of Cotton, at the following places, at dates annexed.

PORTS.	Stocks on hand, September 1.		Received since September 1.		Expo'd from Sep. 1, 1866, to dates.			
	1866.	1865.	1866.	1865.	To Great Britain.	To France.	Total to Foreign Ports.	Consume-wise Ports.
New Orleans, Aug. 27.....	102083	83289	712923	716007	409521	160853	618940	248376
Mobile, Aug. 23.....	29009	24290	230149	421069	145543	4362	153411	61325
Savannah, Aug. 16.....	5547	4005	245080	253057	111664	959	114173	134340
Charleston, Aug. 23.....	5535	1872	157798	108205	75547	3524	80896	87397
Florida, Aug. 15.....	1363	12650	57900	146884	3019	—	3019	54556
Virginia, Aug. 17.....	3466	—	105831	86710	11155	—	11155	94676
North Carolina, Aug. 17.....	—	—	30303	64281	534	28344	534	84769
Texas, Aug. 17.....	8511	13857	178867	174587	60751	—	70448	91825
N. Y. overland, &c. Aug. 19	100000	74862	119208	136153	374307	—	467817	—
Other Ports, Aug. 10.....	20856	20800	—	—	26983	—	27498	—
Total, bales.....	276368	235675	1843860	2060153	1213024	198041	1547891	807264
Total to dates, in 1865.....	235675	—	2060153	—	1247976	218124	1537655	866291
Increase this year.....	40693	—	—	—	—	—	10926	—
Decrease this year.....	—	—	216293	—	34952	20083	—	59027

IMPORTS OF COFFEE AT NEW ORLEANS.

The following from Mr. H. T. Lonsdale's Annual Coffee Statement of July 1st, shows the general movement of the trade up to that date:

Imports direct from Rio de Janeiro from 1st July, 1866,
to 30th June, 1867, at this port..... 81,013 bags.
Same time last year..... 44,055 "

Increase this year..... 36,958 bags.

Stock in hand this day..... none.
Ditto same time last year..... 3,012 bags.

Taken for consumption of direct imports from 1st July, 1866, to 30th June, 1867.....	81,013 bags.
Same period previous year.....	40,143 "
Increase this year	40,870 bags.

Total imports from Rio at all the United States Ports from 1st July, 1866, to 30th June, 1867.....	910,000 bags.
Same period previous year	805,045 "
Increase this year.....	104,955 bags.

Stock on hand in the United States on the 30th June, 1867:	
New York	62,000 bags.
Baltimore	34,000 "
Philadelphia	5,500 "
New Orleans.....	none.
Mobile.....	none.
Same time last year.....	101,500 bags.
Decrease this year.....	176,000 "
	74,500 bags.

Taken for consumption in the United States from 1st July, 1866, to 30th June, 1867.....	984,500 bags.
Average monthly sales for consumption in the United States from 1st July, 1866, to 30th June, 1867.....	82,044 bags.

From our own tables we collate the following, which gives the direct imports at this port from 1844 to 1861 inclusive, and the direct and indirect since:

	From Rio de Janeiro.	From Cuba, Laguayra, &c.
1844.	161,082	52,857
1845.	167,669	4,094
1846.	215,031	10,899
1847. ..	205,111	43,931
1848.	239,371	8,590
1849.	299,129	16,341
1850. .	225,013	20,627
1851.	274,690	10,367
1852.	353,616	12,525
1853.	338,412	10,812
1854.	228,600	11,057
1855.	341,138	2,228
1856.	379,232	10,885
1857.	427,323	6,057
1858.	284,955	1,268
1859.	404,093	3,303
1860.	278,956	4,590
1861.	282,718	1,376
1862.		360
1863.	10,431	392
1864.	13,374	158
1865.	15,948	1,514
1866.	53,748	6,458
1867.	72,837	9,378

ART. VIII.—DEPARTMENT OF MISCELLANY.

1.—APPEAL OF THE MASSACHUSETTS RECONSTRUCTION ASSOCIATION.

VERY few of our Southern readers know how expensive a thing party has grown to be at the North, and how extensively and intimately the question of money is associated with the results of an election. But the Republican party is keenly sensible of the potency of green-backs, as a *point d'appui* superior to all others, and it is estimated will expend fifty millions to secure another lease of power by controlling the Southern elections. How this immense sum of money is raised the annexed circular will partially explain; for information as to how it is expended we must refer to Messrs. Wilson, Kelly, and other radical lecturers, and to the loyal Republicans in the South whose Unionism has suddenly become so rampant.

A correspondent in Boston, a gentleman of fine intelligence and scholarly attainments, writing upon other matters, sends us this circular—where his name appears with fifty-six other signatures—and naively says in a postscript, "You will see from the enclosed that I am a radical." We should say so.

We give this interesting document the benefit of our circulation. The extravagance of its mis-statements will prove its own best refutation.

As the time for preparation for the elections soon to be held in the Southern States approaches, numerous applications have been received by individuals, from loyal men in all parts of the South, for aid in the work of Reconstruction of the States lately in rebellion.

In the full assurance that the men of Massachusetts, first in the field in defence of the Union, never tiring through the four long years of war, nor despairing of their country's cause in its darkest hour, will not shrink from the last effort needful in behalf of the Union and equal rights, where one more exertion only is wanting to secure the full fruition of their triumph,—the MASSACHUSETTS RECONSTRUCTION ASSOCIATION has been organized,—to lay before the people of the State the vast importance and urgent necessities of the work remaining to be done at the South at this moment—to systematize and harmonize the efforts for the assistance of our friends in that section—to gather into one reservoir the aid proffered in response to their appeals—and to distribute it wisely, economically, impartially, and in proportion to the ascertained wants of the different parts of the South, in coöperation with associations in New York, Pennsylvania, and other States which are working for the same end.

The most trustworthy information from various sources has convinced us that, with such help and encouragement as the great and successful Republican party at the North can, and ought to extend to its brethren at the South, properly directed, they will, at these elections, secure in a majority of the States lately in rebellion, the control of the State governments, and their representation in Congress, by their true and loyal Union citizens; and that, in all of these States, they will be able to establish the party of freedom and the Union upon a firm and permanent basis.

It is universally agreed, that the Reconstruction policy initiated by Congress will be everywhere acted upon, and the States, reconstructed under that policy, apply for admission to Congress; and that, moreover, at these approaching elections, the freedmen, and others heretofore deprived of all political rights, will for once be allowed fairly to vote. But our information is equally conclusive to the point, that, while many of their most

influential men have honorably accepted as final the result of their appeal to arms, yet there still exists in all the Southern States a large party of unsubdued rebels, who have learned nothing, forgotten nothing, forgiven nothing, who by their ancient ascendancy and well-tried organization, have governed these States in the past in the sole interest of the slave-owners, and are determined to reëstablish their former supremacy. No exertion, no artifice, no allurement, or flattery, will be spared by these men to deceive, if possible, the freedmen into giving them their support at these elections.

If allowed to carry these States at this time, they will fill every office, from that of governor to that of constable, with those who sympathise with secession, and are the implacable foes of equal rights. They will present themselves in Congress with increased representation, ready to join hands with any party which will bid for their alliance by uniting in their settled purpose of overthrowing all that has been won by four years of war, and by sufferings and sacrifices innumerable. And if they should succeed, it is doubtful whether they would ever allow, at another election in the South, the freedmen to exercise their newly-acquired rights with any degree of fairness.

To secure for all time the glorious results already achieved, to give the death-blow to secession and slavery, to bury the spirit of rebellion beyond all hope of resurrection, to establish the integrity and peace of the Union in such firm majesty, that its most malignant enemies shall never again dare to raise their heads—one more effort must be made by the patriotic men of the North, and made promptly.

We must recollect that the masses of the Union men in the Southern States, and especially the freedmen, are entirely unaccustomed to united action, and to the machinery of political organization; that they are beyond the ordinary reach of the press; that they are impoverished, and, worst of all, disheartened by finding the National Administration opposed to them, and throwing all its influence, upon every practicable occasion, upon the side of their rebel enemies.

To remedy these evils, the great Union party of the North must stretch out its hand to its friends at the South, and must cheer them in this their first struggle for self-government, against the disciplined hosts of their hereditary enemies. It is the first struggle, but, if not now abandoned by us, they will gain a victory which shall establish their strength for all future time; for the rebellion, undertaken as much to affirm the supremacy of the slave-holder at home as to gain the control of the Federal Government, defeated in the field, routed in its stronghold in the Executive mansion, and crushed in its last stand in the States, will be heard of no more, save in the history of the past.

We therefore call upon the people of Massachusetts to contribute to this final triumph, and tender our organization, which we invite them to join, as the most practical means for insuring this great object.

Boston, June 13, 1867.

2.—HOW BUSINESS IS DONE IN NEW YORK.

Strangers in New York, stunned by the rush and whirl and din everywhere present on the streets, pushed and jostled by an endless throng of eager, hurrying pedestrians or caught in some seemingly hopeless jam of trucks, wagons and omnibuses, exclaim with wonder, "how *can* any business be completed here?" "Is system possible?" The feeling is quite natural, but actual experience will soon convince him that in this apparent chaos there is substantial system, and that the wheels of commerce are moving in accustomed grooves, not noiselessly, it is true, but swiftly and surely, and with purpose well defined.

The numerous exchanges of New York afford facilities for the transaction of business which are rendered imperatively necessary by the magnitude of the trade which centers there, and a visit to any of these marts will at once explain much that would otherwise perplex the stranger. From the lively columns of the New York *Evening Gazette* we borrow a description of daily scenes at the Produce Exchange, where, in a few hours, transactions involving millions are consummated :

Fifteen hundred men marching in solemn procession at eleven o'clock each day through a handsome sandstone portico, and up a flight of elegant black-walnut stairs, each with a pasteboard box under his arm, such as ladies use for the purpose of carrying collars and pocket-handkerchiefs. Some of the pasteboard boxes are of a dark blue, others are yellow, and a few are pink. With this exceptional peculiarity, the gentlemen seem to be well-to-do in this world ; they are dressed in the ordinary business suits of New York merchants. Some of them are in black, with white neck-ties, like "men of cloth ;" others wear beaver hats, smoke cigars, and flirt canes. Having reached a large and really beautiful upper hall, these fifteen hundred gentlemen deposit their boxes upon the top of a table, each one having a certain space of the table, about a foot or eighteen inches square, belonging to him as his exclusive property, the boundaries of his domain being indicated by a red line.

Before proceeding further with our narrative, it may be well for us to imitate the well-known example of story writers, and introduce to our readers the subject of our sketch and its location. The Produce Exchange of New York city is situated upon the lower end of Broadway, about half way between Bowling Green and the South Ferry. It is a large, handsome, brick building, covering a whole square, and therefore bounded by four different streets. Entering the house, we find it contains but two rooms, the lower floor with a handsome black walnut staircase in the center, which ascends to the hall above, said hall being fitted up to the ridge-pole of the roof. The first floor is used as a reading-room, a general assembly room, and as a provision exchange. About fifty newspapers are on file from the different States, Canada, and Europe, most of them of a commercial character. There are two telegraph offices in the room, through which the price of gold comes every half hour, as well as the market prices, and other valuable information. This room also contains what is known as the lard table, of which more hereafter.

THE PRODUCE EXCHANGE.

The Produce Exchange was erected in 1861 by a stock company for the benefit of those merchants who deal in flour, grains, and provisions. It has been fitted up with all the necessary conveniences, and any respectable merchant may become a member of the exchange, having the right to buy and sell within its walls, and all the other privileges belonging thereto, upon the annual payment of twenty-five dollars. The present number of the members is about two thousand, and it is expected that it will reach the figure of twenty-two hundred. Members reside all over the United States, in Canada, and Europe. Some only attend the Exchange once or twice in the year ; others are there every day. It is open to business. The sales made at the Exchange are all private bargains. There is none of that wild North American Indian war-dance excitement, riot, and confusion, often seen at the Stock Exchange or Gold Room ; there is no calling off of the different brands of flour, of the grains and provisions, as there is of the stocks—"Michigan Central, Great Western, and preferred !" It is against the by-laws of the Exchange for loud talking or boisterous conduct to be indulged in, and the man who allows himself to do it is quietly told he must not ! So the scene at the Produce Exchange, while the men are on 'Change, is a quiet and interesting one.

Recently the New York Commercial Association has become consolidated with the Produce Exchange Company, and both now do business under the same roof, each having its set of officers. The support of the building and income to the stockholders is all derived from the subscription of members to the Exchange. Two thousand members at twenty-five dollars a year gives an income of fifty thousand dollars, which, no doubt, more than pays the cost of keeping up the establishment, as well as a good interest upon the original investment.

THE OFFICERS.

The officers of the Produce Exchange Company are Francis M. French, president; Edward Cromwell, treasurer; Stephen N. Carey, secretary; and Stephen D. Harrison, John S. Williams, George D. Cragin, Robert J. Randolph, and Benjamin C. Bogert for trustees. The officers of the New York Commercial Association are Erastus S. Brown, president; Benjamin C. Bogert, treasurer, and John D. Boynton, secretary. Among those gentlemen who visit the Exchange are all the prominent flour, grain, and provision dealers of the city. George Law is frequently seen there; the firms of Spring & Haynes, Robert P. Getty, George D. Cragin, and a thousand more which might be named.

HOW SALES ARE MADE.

There are usually about fifteen hundred men on 'Change daily, and the average number of visitors will amount to three hundred. The first floor, besides the other purposes already named, is known as the oil, lard, and provision exchange. Those gentlemen who have hams, pigs, pork, fish, and such like articles to sell, meet and compare notes, or, in other words, they conclude bargains with each other. A. has one thousand hams of the average weight of fifteen pounds each, of a certain quality, which he wishes to sell; B. will give him so much a pound if they are what A. represents them to be. The bargain is concluded, and B. sends his clerk to A.'s store to look at the hams, and if he is satisfied with them, order them sent home. In this way all kinds of provisions are sold. In one end of the room on the first floor is the lard table—a long narrow table, fitted up with eighteen or twenty drawers. Each of these drawers is owned by some merchant who deals in lards, oils, fats, etc. The drawers are filled with paper boxes containing specimens of the lards. The drawers are lined with lead so that they may be easily cleaned. When the hour for exchange arrives, the merchant who wishes to sell any of his goods takes out a specimen of them from his drawer and puts it on the top of the table. Those who wish to purchase examine the article, and, if they are satisfied with it, offer a certain price per pound, governed by the price of gold and the market quotations. In this way the bargains are made.

SETTING THE TABLES.

The most interesting part of the Exchange is that known as the flour, wheat, and grain, which is held in the large and upper hall. The room is filled with long and stationary narrow tables, each of which has from sixteen to eighteen drawers. The tables are arranged in rows, like pews in a church. Around the sides of the room there are zinc pans resting upon stationary pedestals. On looking into them, one is surprised to notice that they have the appearance of the housewife's bread-pan, in which the family staff of life is prepared. Their use can hardly be imagined until it is explained from actual observation.

The gentlemen who have flour, wheat, corn, oats, seeds, and barley to sell exhibit specimens of these articles in the fancy-colored pasteboard boxes before named, each box holding about one pint of the article named. Many keep their specimens locked up in the table-drawers, while others bring them from the stores which they represent. A stranger wonders why so

many men can be seen at the lower end of Broadway about eleven o'clock in the morning, each with half a dozen boxes under his arm! The table having been set ready for the inspection of those who purchase, the room presents a curious sight. Each box of flour contains a card showing its brand, quality, and the number of barrels offered for sale. On each table there are half-a-dozen small tea-pots, some rusty, some bright, some of silver, and some of block-tin, all of the smallest size, seldom holding more than half a pint. These tea-pots are drawn from out deep coat-tail pockets, or taken from the drawers, and being filled with pure Croton are put upon the table by the side of the boxes of flour.

MANUFACTURING DOUGH-NUTS.

By half-past eleven o'clock the room swarms with a thousand men; they are moving and circulating in every direction, are talking in an under tone. Soon one gentleman pulls up his coat-sleeves and pitches into the work before him. A certain box of flour has struck his fancy, and he has determined to try its quality. Taking what is called a tryer, a long silver-plated, half-cylindrical piece of metal, he scoops up a handful of flour, which he puts into his left hand; he then works it with the fingers of the right hand until it has assumed a cone-like appearance, when he punches a small hole in the top of the cone with his index finger. (There is a proper way to do all things.) Seizing one of the small tea-pots, he fills up the crater of his miniature volcano with water, and immediately commences to mould it over until it all hangs together, making a dough-nut about the size of a butter-nut. He now tests the strength of the dough by pulling it to pieces, and continues working it between his thumb and fingers like a piece of putty. If the dough refuses to yield its adhesive properties, but strings out to some length before it will snap the thread of its existence, the flour is of a poor quality; if it breaks off short like a pipe-stem, it is good. The feeling of the dough also indicates a good deal to those who are in the habit of testing flour. The sight is a comical one, nevertheless, so many well-dressed men, (with white beaver hats on) going so gravely into so simple an operation. No sooner does the first man commence to make up his cakes for the day, than fifty or five hundred follow his example, and the Produce Exchange immediately becomes one vast baker's shop. During this interesting process, a good deal of flour and dough gets on to the floor, and at half-past twelve, when the Exchange closes, the floor is white with flour, like the inside of a grist-mill. Immediately a force of women are set to work to clean up after those inconsiderate men. On Saturdays no less than ten women are employed to sweep out, while thirty follow with pails of suds and scrubbing-brushes! The pans before mentioned are known as waste-pans, and when the gentlemen have fingered the dough as long as they wish, they toss the ball into one of these pans, so at a certain hour of the day there is quite a flying about of dough-cakes in the room. Those who are inclined to be jocose might throw, by mistake, one of these cakes at their neighbors, but this is against the law. There are other methods of testing the quality of the flour besides the one described, but they are much less interesting. At twelve o'clock a gong sounds, and in half an hour the Produce Exchange is empty.

3.—A POPULAR REVULSION IN THE NORTH.

That able journal, the *Charleston Mercury*, thus speculates with regard to the probability, we may say the certainty, of a popular revulsion from the extreme Radical programme of destructiveness, and very properly bases its argument not upon the chances of any latent impulse of magnanimity in our enemies but upon the safer hypothesis, that the dictates and motives of self-interest will ultimately force them to accord justice to the South as a

measure of self-preservation. There are already abundant evidences of an awakening to the perils of the situation. The shouts of triumph over the victory in Tennessee have an ominously hollow sound. Men of ordinary intelligence cannot fail to see the tendency towards anarchy engendered by the sudden elevation of a weak-minded, ignorant and half-savage element, and the Republican party trembles at the vagaries and the insubordination of the spirit it has evoked. The *Mercury* says :

Whenever it is said that there is a reasonable hope that the course of time will cause such a change of public opinion in the North as will cause the defeat of the Radical party and the restoration of the South to her full political and civil rights, there are always to be found prophets of evil who declare that all such expectations rest upon an insecure foundation. These prophets say that the belief that there would be a reaction in the North has already done much harm in the South, and that, if she trusts to any returning sense of justice, the South leans on a broken reed. They say that Congress is not in advance of the Northern people, that its doctrines are not in advance of the doctrines of the North ; but that, on the contrary, the Northern people are, upon all questions connected with the South, more advanced than Congress is, and that those people are more bitter, more vindictive and more prejudiced against us than this body has proved itself to be. They point to the constitutional amendment, and to its rejection by the Southern States trace all the troubles that now oppress us. They say that Congress has gone from bad to worse, and is going from worse to worst, and that the only hope of the South is in a prompt and cheerful acquiescence in the conditions which are imposed upon her. All change, all moderation, all kindly feeling, as regards the South, they believe to be dead ; and, by descriptions of what is not, but may be, and of what terrible consequences, as yet unthought of, continued stubbornness may bring upon our heads, they justify the devious ways of Congress and lend a firm support to every phase of Congressional reconstruction.

There is nothing to be gained by kicking against the pricks, and we care not to trust to a hope that a moment may sweep away. It may be that the Northern people are more cruel in spirit than they were two years ago, that they are more disposed to crush us now than they were six months since. It may be that Congress but represents the feeling of its constituents, that it is but the moderate mouth-piece of incensed Northern opinion. It may be that measures harsher than any of which we yet have knowledge may be proclaimed against us ; that confiscation, incarceration, banishment may brood over us in turn ! But all these things will not change our earnest belief—a belief as earnest as our belief in our own being—that *there will be a revulsion of popular feeling in the North, and that there will be a tide in our affairs, upon the bosom of which our people may safely ride to fortune.*

This reaction may not come in a month or a year, but come it will ! Those who judge of the life of a nation by the short span of man's existence grow faint and weary, when they look to the future and see naught but darkness and gloom. They know that one man may change his whole plans and purposes in one brief moment, and they almost expect that twenty millions of people will, or can, do the same. This is unreasonable in the extreme ; and it arises from a crude and immature knowledge of the circumstances upon which our faith is based.

The United States is now in a revolutionary condition. A great war with its attendant lavish expenditure of money, its recklessness of life, and its weakening of social and individual ties has ended. A party which made that war its instrument and tool looked with dismay upon its termination. By the war they had gained power, and after its close they accomplished every purpose which their most extreme members had ever formed. If the country were allowed to remain in a condition of peace, there was no further

grievance for them to agitate and discuss, and, in the absence of such a catching watch-word as would excite the passions of the people, the downfall and destruction of the party were certain. Then did this party take advantage of the animosity engendered by war. They raked the dying embers together, fanned them into a flame, and preached wrath and desolation against the people of the South. Artfully the strings were pulled, and the unconscious North may have believed that it was securing its own eternal freedom by securing, as far as in it lay, the eternal slavery of the South. It did not realize that one member of the body politic is affected by the other, that there are diseases of sympathy as well as those of contagion. It does not yet fully understand that the destruction of liberty in the South is the danger of the liberty of the North, and that those who desire to kill the freedom of ten millions of people will, when that crime is completed, turn their strength to encompassing the ruin of the twenty millions that remain. When they do understand this, the change of feeling will commence.

Nothing is expected as a matter of charity or brotherly love. Nothing is expected but from motives of self-interest. But when stern events teach the lesson that anarchy in the South means threatened anarchy in the North;—that military dominion in Virginia and the Carolinas means military dominion in Kentucky and Maryland;—that forcing universal suffrage upon the South means the attempt to enforce universal suffrage in the North;—that the destruction of the constitutional rights of Alabama and Georgia means a future meddling with the reserved rights of New York and Massachusetts;—that illegality in the South means a consequent illegality in the North;—that confiscation of the lands of the Southern planter means repudiation of the hoarded bonds of the New England financier;—that negro Congressmen from the South means that in the North the negro and the Radical are to be omnipotent, *then* the revulsion of feeling will commence;—then those who flattered and petted the party of revolution will wish that their tongues had been plucked from their throats ere they gave a Radical one word of praise;—then those in the South who despaired and turned back will be valued at their true price;—then the doctrines of those who, in good or evil fortune, uphold the right against the might, and assert the ways of eternal justice against the expedient paths of men, will be honoured by every party and find some warm disciples in every struggling land.

4.—THE CITY OF MEMPHIS IN PERIL.

A correspondent of the *Nashville Union and Dispatch* having suggested that Memphis was liable at any moment to "fall in" to a watery abyss beneath it, caused by the subterranean flow of the Mississippi, the *Memphis Bulletin* adds the following:

The river shore in the navy yard has rapidly disappeared. There steamers rarely land. In front of the city proper there are always from ten to twenty steamers. By these the earth, at the water's edge, is protected and the force of the surface current is broken. Hence it happens that the earth at the water's edge, and for ten or twenty feet below, remains unbroken. The great body of the mighty tide of waters, forty and fifty feet below, rushes onward in its unresisted course rending away the earth. How far the stream passes beneath the city there is, of course, no means of ascertaining. The explosion of torpedoes, forty or fifty feet below the river's surface, shook every building West of the bayou. Beyond the bayou the shock was unheeded, unfelt.

Many years ago a saw mill was at work in the swamps of Arkansas, twenty miles from the Mississippi. The owner awoke one bright morning to find his well dry, in which the day before there was water three or four feet deep. He cut a trench to a broad, long surface pond, not far away, and was again supplied with an abundance of water. This trench connected

the pond and well. Three days elapsed, and pond and well both were empty. The old man of the mill was amazed. The story was told to a traveler from Memphis. 'It is plain enough,' he said, 'the river is lower than for years past, and your well and pond have emptied themselves into the great sewer of the continent.' The Mississippi not only overflows, but underflows all the broad valley through which it passes. Its channel, however broad and deep, could not contain all the rains that fall and streams that come down from the mountains, territories and States of America. At Fort Pillow and Randolph every evidence of war has disappeared, swallowed up by the great river. Earthworks at Randolph, built in 1861, three hundred yards from the shore, have gone to the Balize. At both these places the river current, as here at Memphis, strikes the shore at almost right angles. A city paper tells us how a planter within the week deposited five thousand dollars' worth of supplies upon the river bank somewhere in Arkansas. He had not gone half a mile when the country behind him disappeared with all his stores.

Reelfoot Lake is fathomless. It is not far from the river. The night before the earthquake of 1812, lofty trees stood where deep, silent, still waters have unbroken repose. Cypress trees, two hundred feet high, went down. Their loftiest branches do not reach the surface of the wonderful lake. Years before the great river had undermined the country, the land went down and water came up. Everywhere around New Madrid we have indubitable evidence that the mighty river finds its way far beneath the earth's surface. An earthquake's shock broke down the earthen bridges that everywhere along the river shores span mighty streams and deep subterranean lakes that are reservoirs to supply atmospheric moisture and hold the superabundant waters of this broad valley.

5.—TRIBUTE TO THE CHARACTER OF GENERAL LEE.

In a long editorial article calling for the donation of £10,000 to Washington College, by the friends and admirers of General Lee in England, the *London Standard* speaks of him as follows:

There is no living hero—there are none, if any, whose name shines with the purest lustre in history—whose character has commanded so high a tribute of affection and admiration from their friends of respect and honor from their foes, as that of General Lee. No life more perfectly heroic, no reputation more untarnished even by the minor blemishes which are not uncommonly found in union with the highest heroism, has ever been connected with a great national struggle. No shade of vanity or egotism, nothing of the self-will or petulance so often characteristic of conscious genius, no tinge of affectation, no taint even of the pride almost inseparable from ordinary greatness of mind, which can endure everything but humiliation, and regards submission as disgrace, alloy the simple grandeur of the Virginian soldier's nature.

A piety without the slightest shadow of Pharisaism, a sense of duty to which the sacrifice of every personal feeling and interest appears a matter of course, have marked his whole course and guided his every public act, whether as a soldier or citizen. A family connection and the nearest living representative of the great champion of American Independence, General Lee has been the Washington of the Confederate war; like Washington, a man "whom envy did not hate," but without even the one dark stain of doubt, if not of dishonor, which the death of Major André has left on the memory of his prototype. No more "selfless man and stainless gentleman" ever lived; no soldier ever set a more admirable example of the soldierly virtues of honor, chivalric generosity and manly simplicity; no great man ever retired into obscurity, after witnessing alike the ruin of his cause and destruction of his private fortune, with more of Christian patience and unshaken fortitude.

Of his military achievements we need not speak. It is enough to say that nearly all his victories were won against enormous odds, and that his four years' defense of Virginia has few parallels in history as an example of great results accomplished with small means and a fearful disadvantage.

What is now more interesting to remember is the personal character of the man, as displayed in the various exigencies of that trying struggle; the simple honesty and kindly feeling which prompted him to console his soldiers as they recoiled from the cannon-crowned height of Gettysburg, with the assurance, "It is all my fault;" the unaffected self-depreciation which pronounced when Stonewall Jackson fell, "I could wish, for the sake of our cause, that I had been disabled rather than you;" the Christian chivalry, which no outrage could provoke to retaliation; which, after Virginia had been rendered a desert, withheld the army that invaded Pennsylvania from inflicting the most trivial injury on person or property, which, when his own estates had been plundered, ravaged and confiscated, took care to protect the houses and property of his enemies; the horror of useless bloodshed which withstood the cry for retribution excited by the murder of Southern prisoners in cold blood, and supported the resolve of the President that unless the actual murderers were taken, no blood should be shed but on the field of battle; the touching unselfishness of his last words to his disbanded army, on the sorrowful 9th of April, "I have done my best for you." But it was when all was over—when the chief of a great and long victorious army was a private man and a paroled prisoner—that the peculiar greatness of General Lee's nature shines out with unequalled brightness.

6.—THE SCIENCE OF ADVERTISING.

The *Utica Herald* has the following sensible article on this subject. We commend it to the attention of all classes of business men:

Few business men advertise systematically, liberally and persistently. Those who pay most attention to it, either advertise fitfully, or with a degree of neglect which they would regard culpable in any other department of their business. What would a merchant be thought of who only opened his store now and then to invite and serve customers? Yet an advertisement in a flourishing paper is more conspicuous than one's store, is more observed and more spoken of, and to withdraw it is like putting up the shutters or taking down the sign. The most enterprising merchants and traders in the interior think themselves liberal if they spend a few hundred dollars a year in advertising. They would deem the farmer blind to his own interests who should be stingy in planting, and should fail to put in seed in proper quantity, because it cost something. Advertising is the seed-planting of the business-man, and stinginess here must make the harvest meagre.

What shall be the sum appropriated to advertising? It will vary with the character and extent of business. But the smallest trade can be made more profitable, and the largest can be extended, by liberal advertising. The rule is sometimes given that as much should be paid for advertising as for rent. This may be too much in some cases, too little in others. But every business ought to be kept constantly and prominently before the readers of the established papers of the parish from which trade is sought. The readers of newspapers are the most enterprising and the most intelligent of the population, and usually have the most money to spend. Reach them, and keep their attention, and you create a current which others will follow.

The *New York Tribune* states that it is true, as reported, that a Boston druggist, who has a specialty before the public, is paying that establishment \$10,000 a year for advertising; he paid \$1,500 for the insertion of one mammoth advertisement. The *Tribune* adds: "Bonner once paid us \$8,000 for one insertion of an advertisement of the *Ledger*. He knew that by judicious advertising he could insure a fortune." This seems large.

But in England such sums are hardly exceptional. There advertising is a regular part of business. It is reckoned as necessary as rent, and often ten times as much is spent for it. Advertising must be done so as to reach the people whose custom is sought. A separate sheet, a hand-bill or a circular, is a direct attack; and the person who receives it either throws it aside without reading, or he puts himself on the defensive against it. A notice in the favorite paper is a flank movement; it catches the eye unawares; it attracts attention in an idle or a listless moment; it becomes part of the current news. Then it is like the constant dropping. It may not be read to-day. To-morrow it will be glanced at. The next week it will be looked over. Finally it will be read. When a purchase is to be made; when trade is to be transferred from the former dealer; when a new article is needed, the notice will be hunted up, and the inducements offered subjected to test. One such case will often pay for a year's advertising.

Sometimes men get along without advertising. Instances are given of pilgrims reaching Mecca on their knees. It is easier, pleasanter, swifter, to travel by cars. Liberal and discreet advertising puts business on wheels, and renders it active, beneficial to the public, and remunerative to the dealer.

7.—FACTS ABOUT IVORY.

To supply the ivory necessary to manufactures of Sheffield alone a large army of elephants are killed annually—some years ago estimated at as many as 22,000. Though the largest and strongest of animals, the largest elephant drops instantly if hit with a bullet in the eye, or the base of the trunk or behind the ear. Every civilized nation requires the ivory, and the elephant not being a prolific animal, it is not improbable that the time will not be long when he will be an extinct species. The hippopotamus, the walrus and the narwhal possess teeth, horns or tusks which serve for ivory, although the elephant is the only animal which supplies the genuine article. Of the two species of elephant, the Indian and African, the latter have by far the largest tusks, 325 pounds being the weight of a single pair, measuring eight feet six inches in length. This pair was at the exhibition of 1857. Ivory of an extinct species—"things of Adam's time"—so called on account of its antiquity, was found in Siberia. In the New Siberian Islands are found immense deposits of tusks, horns and other animal remains, apparently caused by some immense drift which carried the lighter ones the farthest.

8.—FRENCH FINANCE.

Of the taxes raised in France the Paris correspondent of the London *Economist* gives the following particulars:

A return of the taxes received in the first half of the present year has been issued. Of direct taxes, the amount paid in that period was 273,595,000*fr.* leaving 267,581,000*fr.* due for the second half of 1867. The 273,595,000*fr.* were more by 48,105,000*fr.* than were strictly due, the custom being to allow a month's credit in the payment of these imposts; but in 1866, the amount paid in advance at the end of June was 48,992,000*fr.*, and whereas in the first six months of that year the expenses of legal proceedings to enforce payment was 73 centimes per 1,000*fr.*, it was in the six months of this year 78*c.* These figures show, of course, that the public is not so well off as it was; but considering the depression in trade and in Bourse speculation, greater difficulty in payment might have been expected.

The indirect taxes in the first six months of this year produced 601,346,000*fr.*, which were 6,676,000*fr.* less than in the corresponding period of 1866, but 49,017,000*fr.* more than in that of 1865. The decline of this year is explained by the tax on railroads being deducted on account of its being set apart for the sinking fund (as, however it was received, it ought to have figured in

the receipts), and by reductions in registration, tonnage and other dues; also by a change in keeping the accounts, under which a certain amount of duties owing before the 30th of June were allowed to be left unpaid. But for these circumstances, an augmentation of more than 9,000,000*f.* would, it is said, have been presented.

The following is a detail of the indirect taxes:

Designation of Indirect Taxes.	First six m'ths of 1867. France.	First six m'ths of 1866. France.	First six m'ths of 1865. France.
Registration and mortgage dues, etc.	174,768,000	172,339,000	162,824,000
Stamp duties	41,851,000	41,837,000	38,848,000
Customs duties on imports	34,246,000	32,072,000	31,015,000
" " " exports	120,000	106,000	91,000
Navigation dues	285,000	2,073,000	1,739,000
Various Customs duties and receipts	696,000	691,000	634,000
Salt tax levied by Board of Customs	9,545,000	9,659,000	10,184,000
" " " Indirect Taxes	4,624,000	4,509,000	4,177,000
Duty on wine, beer, etc.	108,565,000	116,972,000	107,547,000
Various duties and receipts	15,710,000	17,240,000	15,999,000
Sale of tobacco	121,405,000	118,223,000	115,087,000
Sale of Gunpowder	4,881,000	4,773,000	4,685,000
Post-office	35,399,000	33,791,000	32,696,000
Duty on money orders by post	725,000	655,000	598,000
Duty on articles of value sent by post	491,000	459,000	409,000
Duty on transit of foreign mails	207,000	323,000	250,000
Various receipts	33,000	23,000	25,000
Duty on French colonial sugar	17,413	17,867,000	9,514,000
Duty on foreign sugar	5,861,000	6,224,000	7,878,000
Duty on native sugar (beetroot)	25,021,000	28,596,000	8,129,000
Total	601,346,000	608,022,000	552,329,000

9.—FINANCES OF GEORGIA.

The State Treasurer of Georgia makes the following statement of the financial condition of that State on the 1st of July, 1867:

GENERAL STATEMENT.

Assets, exclusive of taxes,	\$11,018,600 00
Bonds in the Treasury not sold,	990,000 00
Total,	\$12,008,600 00
Total debt, including interest,	6,256,635 00
Assets over all liabilities,	5,751,965 00

PARTICULARS OF ASSETS AND RESOURCES.

The assets and resources of the State of Georgia are, first, the property of the State, consisting of: the Western and Atlantic Railroad, now paying into the Treasury as net profit, \$50,000 per month, or \$600,000 per annum, being 6 per cent on		10,000,000 00
10,000 shares of stock in the Atlantic and Gulf Railroad Company, connecting Savannah with the waters of the Gulf at Bainbridge, Ga., and the Gulf shore at St. Marks, Fla., promising, in the early future, handsome dividends at \$100 per share,		1,000,000 00
186 shares stock in the Georgia Railroad Company, paying annual dividends of 10 to 15 per cent. at \$100 per share		18,600 00
Total,		\$11,018,600 00

TAXABLE PROPERTY OF THE STATE.

The taxable property of the State, exclusive of railroads, banking, express and insurance companies, is estimated at low figures by the Comptroller General, at two hundred millions of dollars, \$200,000,000 00

Estimated receipts from general tax at $\frac{1}{2}$ per cent. on that amount	500,000 00
Estimated receipts from specific taxes on polls, professions, &c.	150,000 00
Estimated receipts from tax on banks, railroads, express, home and foreign insurance companies, &c.,	33,000 00
Estimated receipts from miscellaneous sources,	10,000 00
Estimated receipts from net earnings Western and Atlantic Railroad,	600,000 00
Estimated receipts from dividends from other stocks	2,000 00
Total,	\$1,295,000 00

DISBURSEMENTS FOR THE YEAR 1867.

The estimate by the Comptroller General in his last report of the necessary, usual and probable disbursements for the year 1867, exclusive of interest to public debt, amounts to \$572,000 00

Leaving a balance for payment of interest and reduction of public debt annually of 723,000 00

Total,	\$1,295,000 00
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JOHN JONES, Treasurer of Georgia.

10.—VALUE OF CONFEDERATE CURRENCY.

We have already given a table showing the relative value of gold and Confederate currency during the war; annexed is a statement showing the value in United States currency for the last four years—computed from the average monthly rates of the respective currencies in gold, at New York, Richmond and Augusta.

As the rate of stamp duty upon documents executed during the late war is based upon the value of the consideration in United States currency, this table will be found very convenient in fixing that value.

TABLE SHOWING THE RELATIVE VALUE OF CONFEDERATE AND U. S. CURRENCY FOR FOUR YEARS.

Average for month of	Value in Confederate currency of \$1 in U. S. currency.			
	1862.	1863.	1864.	1865.
January,		\$2 00	\$13 50	\$26 90
February,		2 19	13 79	25 20
March,		2 93	14 57	34 90
April,		3 23	12 33	
May,		3 87	10 65	
June,		4 85	8 12	
July,		6 89	7 79	
August,		10 53	8 85	
September,	\$2 19	9 71	10 56	
October,	1 95	9 70	12 80	
November,	2 29	9 90	12 55	
December,	2 28	12 60	18 26	

To ascertain the value of a given amount of Confederate currency, divide the number of dollars by the figures in the column opposite the date sought for, and the quotient will be the amount in United States currency.

11.—INTEREST ON SOUTHERN SECURITIES.

The interest on Southern State, Municipal, and Railroad bonds made payable in the city of New York, is paid by the following banks and bankers:

Missouri State bonds,	National Bank of Commerce.
Georgia " " "	" " Republic.
Alabama " new 8 per cent.	Duncan, Sherman & Co.
Tennessee, " " "	Fourth National Bank.
City of Savannah,	Duncan, Sherman & Co.
" Atlanta,	National Park Bank.
Montgomery and West Point R.R.,	National Bank Republic.
Macon and Brunswick (endorsed),	" " "
Selma and Meridian, 1st mortgage,	Winslow, Lanier & Co.
Wilmington, Charlotte and Rutherford, 8 per cent. mort.	Soutter & Co.
Pensacola and Georgia and Tallahassee R.R.,	Rogers' Locomotive Works.
East Tenn. and Georgia R.R.,	Wilson, Callaway & Co.
Mississippi Central,	J. B. Kirtland, Hill, Talmadge & Co.
Jackson and Great Northern R.R.,	Dabney, Morgan & Co.

ART. IX.—DEPARTMENT OF MINING AND MANUFACTURES.

1.—THE TIN MINES OF MISSOURI.

Since our last issue the most important discovery in the mineral history of the country has been made. Although traces of tin have been occasionally detected in ores of other metals, it never appeared in large enough quantities to justify a hope that we could mine our own supplies; now, if the reports are not exaggerated, we can control the tin markets of the world. An exchange says:

It is a certainty that in Southwest Missouri we have an immense deposit of tin ore, easy of access, in a mountainous, heavily timbered region, with extensive water-power afforded by the St. Francis River and its tributaries. The veins are found from two feet to three hundred feet in width, and from a few yards to one mile in length, easily traced on the surface, having been laid bare by the unusually heavy floods of the last spring. We may safely assert that in a few years we will control the tin market of the world. We have the ore and the fuel in abundance, and though labor is comparatively high, we have a counterbalance in the fact that we do not have to sink expensive and deep shafts to obtain the mineral, as they do in England. Our ore is bare at the surface on the hillsides, where for ages it can be cheaply thrown out without the use of those cumbersome and very expensive engines and machinery in use in Cornwall and Wales. As yet the ore has been found in quantity only in Madison county, but indications are found of its existence in Washington and Iron counties; in fact, it was in this latter county that Dr. Farrell found the first specimen of the ore, about nine years ago. He has quietly, but as persistently as circumstances would admit, pursued the search until this last spring, aided by the floods, he discovered those immense veins spoken of. He informs us that all Southeast Missouri may be regarded as a vast storehouse of mineral wealth. Iron, lead, zinc, cobalt, black lead, copper, barytes, ravin and nickel are found in large quantities. Immense beds of fine marble and a very beautiful serpentine are found. There are large tracts of these lands yet Government land, at \$1.25 per acre. The climate is mild—the winters very mild. The valleys are a rich soil, and a pleasant and healthy summer or winter resort.

The *New York World* publishes some interesting facts about the uses of tin, its composition, forms, sources of supply, etc., which we appropriate :

The reported discoveries of vast quantities of this metal in Missouri has created there intense excitement, as tin mines have never been worked to any extent in the United States, and the quantity we require for various purposes has hitherto been imported from abroad. Should, therefore, this rumor be correct our political economists will soon have the pleasure of adding the remunerative production and working of tin to the other resources of the country. Hitherto in the United States a few small crystals of the oxide of tin have been found at Chesterfield and Goshen, Mass., and also at Lyme, N. H. At Jackson, N. H., there is a vein which has furnished small specimens of the ore, and the metal has been detected in the magnetic iron ores of the highlands of this State and New Jersey, and in some of the auriferous ores of Virginia. In California it was found some years ago in such quantity as to encourage the hope of its becoming an important product, but the presence of gold and the eager desire to mine that metal in preference to others, has had the effect of allowing this metal to remain undisturbed and unworked. Within the past few years the gold fever has comparatively subsided in the El Dorado, and the miners are paying more attention to the rich deposits of other metals. Prospecting parties, it is rumored, have discovered there vast quantities of tin, especially the quality called stream tin, which is found among the sand and gravel of superficial deposits, and in concretionary forms, resembling wood in their fibrous structure and concentric layers. If we can obtain tin, at home, in paying quantities, we shall have acquired a valuable product, as this metal, now so largely imported from abroad, is more extensively used in Canada and the United States than in any other country, especially for roofing purposes; as the most important application of tin is for the coating of plates of sheet iron, producing what is known as tin-plates or sheet-tin, or, as it is called in Scotland, white iron. Statistics show that nearly \$7,000,000 worth of tin was imported last year into the United States, in the form of bars, blocks, plates, and sheets, principally from the counties of Cornwall and Devonshire, in England, whose mines for the last twenty years have produced annually about 7,000 tons of tin. Tin costs us now 26 cts. in gold, duty 25 per cent. *ad valorem*, or about 45 cts. per pound in currency. Should tin be found in Missouri in any quantity it can be sold for 24 cts. per pound and yet leave a profit of several hundred per cent.

THE TIN FEVER IN MISSOURI.

A great deal of excitement prevails in that State among capitalists and miners but many are loath to believe that tin will ever be found in the United States. The following letter, however, indicates that the discovery of tin has certainly been made, though whether it will pay to mine has not yet been ascertained :

St. Louis, August 1, 1867.

BUEL T. HITCHCOCK, Esq.—Inclosed please find a plan of township thirty-three, range five, east, in Madison county, Missouri, as you will see by a slip pasted on it taken from the *Democrat* of this city the day before yesterday. There is considerable excitement in that region about tin mines. Last February a Mr. Lane wanted me to invest in the land marked on the plot as his, saying that he had discovered tin there, but I did not pay any attention to it, we had so many other things on hand, because tin mines were a thing unknown in America, and I knew that there were so many opinions about mineral lands of every kind. Notwithstanding this rebuff, he relied on me for help, and continued his investigations. Some time in March he came into possession of a considerable sum of money, and continued to trace the lodes and open shafts on them at different points for over a mile, and found tin-stone at all of them, and on eleven different lodes. At first the geologists here put no faith in the ore being tin, but after a number of trials, finally pronounced it tin. But none of them have ever seen tin ore before, except specimens brought from Europe. About six weeks ago a man named Stoker, an Englishman, who had worked in the tin

mines of England, came to St. Louis, and heard something about it, and said he would like to see it. He went down to the place, and when it was shown to him he immediately pronounced it to be tin. Some of our St. Louis chemists laughed at him, but when he offered to put up \$1,000 it was tin they were unwilling to take the bet. Professor Foster, of Chicago, was then sent for to come and examine the ore, and upon inspecting it he immediately pronounced it tin, and upon a test said it was from six to thirty per cent. Professor Shepherd, of New Haven, Connecticut, is now here, and he says it is tin; and the tin fever is now as nearly rampant here as the oil fever in Pennsylvania was. I expect, from my rambling, you will think I have got the tin fever, but I have only to a certain extent, not enough to hurt me. I have drawn three lines with my pen across the tract on the slip inclosed, showing the direction of the veins or lodes on the ground where it has been discovered, and you will see they go southwest, towards the southwest quarter of section 21; and all those who have examined them say they run across it into the land I purchased for \$200. I have never seen it; but one party that has, thinks we have got a fortune in it. He told me not to think of selling for less than \$50,000; still I do not know anything about it, except by hearsay. This I do know—we are not hurt at what we gave for it in any event. Everyone has the tin fever here, including some of our heavy capitalists. I have before me a specimen of bar tin taken from five pounds of the ore, weighing a trifle less than two ounces.

JAMES E. JOHNSON.

As the introduction of an indigenous metal on the metal market is likely to cause some inquiries into the qualities and uses of tin, the following may be acceptable:

TIN AS A METAL.

Tin resembles silver in color and lustre, though presenting a yellowish tint when the white light reflected from its surface is excluded. It is harder than lead and softer than gold, melts at 442 deg. Fahrenheit, and is not sensibly volatilized at high temperatures, though at a strong red heat it emits white fumes. When very slowly cooled from a melted condition it becomes crystalline, presenting either rhombic plates or octagonal needles, which are distinctly brought to view by treating the extreme surface with dilute aqua regia. The crystalline structure of the metal is the cause of the peculiar crackling sound emitted when a bar of tin is bent backwards and forward. Tin is very malleable, especially when its temperature is raised to 212 degrees. It is readily rolled or beaten into sheets no more than 1-1000 of an inch thick, and is drawn into fine wire. The metal is, however, deficient in tenacity, a wire of 7-10 inch diameter sustains only 34½ lbs. weight. At ordinary temperatures tin is slowly tarnished by exposure to air and moisture; but when melted its surface is soon covered with a film of oxide, and at high temperatures its oxidation takes place so rapidly as to cause ignition, and the metal burns with a brilliant light. Tin is violently attacked by nitric acid, and slowly by strong hydrochloric acid heated, while it is not affected by dilute sulphuric acid.

THE USES OF TIN.

It combines with several other metals and forms with them a variety of useful alloys, as also the amalgam employed for silvering mirrors. In the middle ages Cornish tin was largely used for the bells of churches, and at a later period it was in still greater demand for bronze cannon. Several artificial compounds of tin and oxygen are obtained possessing acid properties. Melasahmic acid one of these compounds, after being treated with cold water, and then rendered anhydrous by ignition, constitutes the polishing material known as putty powder, used for giving whiteness and opacity to enamels for polishing plate. Another oxygen compound is stannic acid, which combined with soda forms a compound largely prepared as a mordant for the use of the dyer and calico printers. It is the basis of what is technically known as tin-prepared liquor. The salt is also used for tinning copper. These compounds of tin and sulphur

are known, of which the bisulphuret is used in arts as an imitation of bronze under the name of mosaic gold. The protochloride and bichloride of tin are used in dyeing and calico printing. The former has a strong affinity both for chlorine and oxygen, and acts as a powerful reducing agent. When added to a solution of chloride of gold a purple powder is perceptible, which is an obscure compound of sesqui-oxide of tin and oxide of gold. It is known as purple of cassius, and is used for coloring porcelain and glass, with which it is incorporated by fusion. Tin foil is used for coating leyden jars, and for making the amalgams used for electrical machines, and more largely for inclosing small packages of tobacco and spices, covering the tops of champagne bottles, &c. The only use of the large sheets is for silvering looking-glasses. Tubes of pure tin are used for gas-fittings, and have been recently applied to the construction of cheap vessels for containing liquid colors used by artists, as also other solid and fluid substances required to be hermetically sealed. Tin wire is soft, moderately tenacious, completely unelastic, and admits of being bent and unbent many times without breaking, but, as before mentioned, its most important application is for the coating of plates of sheet iron.

WHERE TIN COMES FROM.

Cornwall, in England, yields the most tin. Spain still yields some, and so does France and Germany; Australia sends a small quantity. There are mines in India, in Burmah, and also in Madagascar and Batavia. On the American continent the ore is found in Brazil, Peru, Chile, and Mexico. Tin in Greenland is associated with eyolite. The next to be added to this list, it is hoped, is the United States.

2.—CHEAP IRON AND GOOD.

The *London Mining Journal* gives some particulars concerning the Heaton process of converting pigs of low quality into an iron of steel-like properties, which will be read with interest by many who are now engaged in developing the rich ores which abound in almost every part of the South. As long as the present high tariff obtains, it would be well for us if we could rely upon home production for needed supplies of this invaluable material; and there is plenty of it awaiting the pick and the furnace. Says the *Journal*:

At no period in the history of the iron trade was there a better opportunity than that which now exists of making good qualities of finished iron at prices which have not hitherto been regarded as applicable to such metal. The result pointed out is to be attained by close attention to mixtures in the puddling-furnace. Never before were there produced the great varieties of pig, that are now to be found in the market; and never before was there the attention paid to the producing a good quality of pig that is now observable throughout all the iron-producing districts of the kingdom. In chief part all this is due to unfailing stimulus furnished by competition. The old argillaceous districts are now no longer the almost exclusive sources of supply. The hematite districts are now their powerful competitors. Surrounded by difficulties in entering the old consuming market, situated chiefly at a considerable distance from the source of supply, these latter, notwithstanding the abundance of their raw material, have had to give much attention to the most economical methods of manufacture. At the same time they have been successful in continuing to improve the quality of their product. Copying from them certain of the methods which they have found it necessary to adopt, the makers in the old districts have also placed themselves in a position to turn out a better article at a lower price than previously. By all these means combined, the makers of pig iron in the Northern, and also in the Midland Counties, have been enabled to send into the market varied description of pigs, superior in quality, yet lower in price, than had been previously the case.

The tendency of the day, in respect of finished iron, is to descriptions of a

much better class than that which characterized the greater quantity produced before so much of the metal began to be used by civil engineers and architects. At the same time, there is the old cry for cheap iron. The problem which the proprietors of mills and forges are now, therefore, putting forth efforts to solve, is how to make good iron, and cheap. In this, as we have intimated, they have been assisted by the pig-makers, who find themselves in uncomfortable juxtaposition in the market. There are, however, makers of certain qualities that have been known and highly reputed for very many years, who have not found the competition so great as have some others already noticed. Yet they, too, to some extent, have been jostled by the makers of a rich quality, also manufactured in the newer districts. But the growing scarcity of the materials out of which these old and reputed pigs have been smelted prevents the makers of them from yielding to the extent which consumers, who are engaged in working out the commercial problem mentioned, find necessary. These consumers are, therefore, casting about in other directions, and they have not been unsuccessful.

Already we hear from South Staffordshire of mixtures in which the ingredients are large portions of cinder pigs and small portions of rich hematite. With these materials the puddling furnace is made to yield a good quality of iron for certain uses, and it does so at very much under the price at which it can be produced by the irons that have been thought indispensable by makers who have not been in the habit of looking out to profit by the advantages which the experiments of others have thrown in their way. As may be gathered from what we have already said, this result could not have been attained unless the quality of the pigs, which form the basis of the mixture described, had not been greatly improved. In their production a large quantity of flue, or tap cinder, run out from the puddling and mill furnaces, is now extensively used: and in proportion as the qualities of the finished products of the mills and forges increase in excellence of quality, so these cinder pigs become of more intrinsic worth; and the finished products noted are possessing more and yet more of the nature which results in richer cinder in proportion as the rich hematite quality is incorporated. This incorporation is gradually increasing; for not only is the iron which possesses it going into the old districts in the shape of pigs, but it is also finding its way there as ore. In that cinder condition it is made to supply the place of certain qualities of stone, already noticed as becoming scarce in a marked degree; and it is also used in the puddling furnaces as "fettling." For this use the preference which the men have for it over "bull-dog" is very considerable, and that preference leads not unfrequently to considerable annoyance in the management of forges. It is therefore not very difficult to conceive how cinder pigs of the present day may be a much superior article to the pigs possessing the same name found in the market a few years ago. Nor is it hard to imagine that mixtures of the kind we have intimated—the leading ingredients being bought at £2 12s. 6d. a ton—may turn out iron in the finished state that shall be at once cheap in price, and for many uses, good in quality.

The modern tendency is also towards the use of steel for many more purposes than those to which that metal has hitherto been applied; and here, also, it is gratifying to find that good quality and low price may even yet go together. Information has just reached us of experiments having been made with cinder pigs alone to produce steel, experiments which, so far as they have gone, have been attended with gratifying results. It is well known that to produce steel by the Bessemer process, pigs of the richest quality have to be used, and that the desideratum of that invention is how to use iron of less worth. It is also a fact, familiar to most persons who know anything of that process, that the out-put of the crucible now and then bears a proportion to the quantity put in which is not compatible with economy. If cinder pigs should be used in the Bessemer process, the fierceness of the combustion would utterly destroy them. Recently a patent has been taken out by Mr. Heaton, of the Langley Mills, near Nottingham, for converting steel by the use of oxygen, derived from the decomposition of nitrate of soda. Theory has long

been in favor of this purifier, but owing to the specific gravity of the nitrate being so small the great difficulty has been to keep it from the surface, and thereby make its effects more than skin deep. Mr. Heaton's patent consists in confining this nitrate of soda in a chamber beneath the molten iron with a perforated iron plate. Thus, when the molten iron is thrown upon the nitrate, the only means of escape from the fumes is through the whole superincumbent mass. In escaping, the effects are produced which theory has long maintained must result—the iron through which it passes is at once desulphurized and dephosphorized. Thus it becomes riden of those ingredients which it is the object of all refining to expel. And the expulsion is effected without that sacrifice of the valuable portions of the ingredients which, preserved, go to make up the bulk of the converted product.

A few days ago a quantity of cinder-iron was experimented upon at Mr. Heaton's. It was first melted, and then run into the converter. On its way to the converter, the fumes were conclusive of the presence of sulphur. A few minutes only sufficed for the presence of the molten metal in the converter. It was run out and there were sulphur traces no longer. When the $4\frac{1}{2}$ cwts. which comprised the charge had been slightly solidified, it was puddled, and subsequently rolled into puddled bars.

In the process of rolling, it was clear that a kind of steel had been manufactured, for a spurt flew out a distance of several yards, much to the discomfort of one of the workmen, whom it gave, what he termed, "a rap in the mouth." The bars were some of them tested hot, and they bore out the expectation that had been made of their quality during the process of rolling. They hammered like best cold-blast iron, and seemed fitted for the production of tires. Some was punched, and it bore the test well; it likewise bore the ram's-head test. A small portion was then drawn out across the grain, was cut in two, welded and punched, turned into a corkscrew, and otherwise worked in a fashion which the blacksmith declared could only have been stood by first-class iron. The bars yet remain to be experimented upon in the mills; but enough has been seen to lead to the inference that these cinder-pigs so used, may be made capable of producing a superior quality of refined plate metal. So convinced have certain producers of cinder-iron become of the value of their product when used in the Heaton process, that they have it in contemplation to erect converters close to their furnaces, into which they will run the molten metal: and, having done so, will bring it out of the crucible worth more than twice the money which could be obtained for the same product solidified as pig iron.

3.—GOLD MINING IN THE SOUTH.

We almost regret to see so much zeal and energy displayed, and so much capital devoted to the mining of gold in the South, when solid enterprises are languishing for want of encouragement. Gold mines are *ignes fatui* which allure thousands to certain ruin, while a few bold, plausible and unprincipled Wall Street adventurers make fortunes out of the folly of their victims. We think it might interest some of our readers to give a brief account of the process by which gold mines are rendered popular and engineered through a short existence to certain dissolution. First, then, any excitement as to discoveries of gold in a distant locality becomes the basis of the whole operation. A piece of land is bought in the neighborhood of the supposed or actual discoveries, for, we will say, \$20,000; it may or may not have gold upon it, but that is a matter of no earthly consequence. A charter is obtained for the "Spread Eagle Gold Mining Company of Georgia." Capital \$500,000; in shares of ten dollars each. Ten thousand shares are presented to each of six highly respectable men to constitute a Board of Directors. A President and a Secretary are

duly elected, an eligible office down town is rented and richly furnished, half a dozen genteel clerks can be seen at any time writing busily in ponderous ledgers, eloquent prospectuses are scattered broadcast, richly printed pamphlets—containing forged or fraudulent geological surveys and chemical certificates—are freely circulated, and splendid specimens of ores are temptingly displayed, as “merely the outcroppings of the mine.” The bait thus alluringly spread, the gudgeons are not slow in swallowing it, and the haul is prodigious. The victims are usually young clerks, shop-girls and the poorer classes generally, who, impatient of the slow five or six per cent. they receive from the bank, withdraw their little savings, and, investing them in “Spread Eagle,” go home to dream rapturously of plethoric dividends and future wealth. These dreams have a sad awakening; and the victim, with a heavy heart, finds that he has paid for a few months feverish excitement with the hardly-earned savings of many years of labor. The shares are purposely fixed at a low figure to entrap the classes spoken of, as, on “the street,” the whole affair is known to be a bubble, and is simply a subject for ridicule.

But the gudgeons, numerous as they are in a large city like New York, do not absorb more than a tithe, or, at most, a fifth of the stock, and the next step onward tends toward game more cautious and of larger growth. The play now develops a genius for financiering truly marvelous. “Spread Eagle” is placed upon the “list,” and is regularly “called” at the Mining Board, where its advent is accompanied with a flourish of trumpets. “Wash sales” (pre-arranged transactions) are made of several thousand shares at a premium, and the outsiders—men who, having once made a successful hit, abandon all regular business and haunt the Exchange as long as they have or can borrow a dollar—become excited, and several hundred shares are actually disposed of. From day to day the game goes on until gradually the stock is all sold out, and then, and not until then, the “highly respectable directors” are permitted to realize upon their interests. Meanwhile a thousand little manoeuvres are necessary to keep up the market, embracing whispered confidences from the president, secretary and clerks as to the unexampled richness of the mines; rumors of important discoveries are circulated with an air of great caution; the official countenance bears an ill-suppressed beam of elation; the employees are mysteriously reticent, and the circle of victims harbors an angry suspicion that facts are wrongfully withheld, which, if made public, would run the stock up several hundred per cent. From time to time telegrams are shown, reading as follows:

RABUN GAP, June —, 186 .

J. DIDDLEE, Esq., *President of the Spread Eagle Mining Company:*

The property of the Company proves to be very valuable. Sixty dollars to the ton may be relied upon. Hurry up the machinery.

ADAM PUFFER, *Superintendent.*

RABUN GAP, July —, 186 .

J. DIDDLEE, Esq., *etc., etc.:*

Machinery all at hand. I have a large force collecting quartz. The surface-yield is enormous, and will employ the mills for a twelvemonth without sinking a single shaft.

ADAM PUFFER, *Superintendent.*

Here we must pause. To give a minute account of all the devices and strata gems adopted to gull the public would take a twenty-page article in the *REVIEW*, and the subject is not worthy of so much space. Suffice it to say that the projectors and directors having unloaded, the stock becomes merely the foot-ball of speculation, and, by its own weight, gradually sinks, with fitful periods of inflation, to worthlessness. From being quoted in dollars it comes to be quoted in cents, until finally it is dropped from the "list," and is no more heard of except, perhaps, in the law courts, where some desperate victim pursues the officers for misrepresentation and fraud, and, obtaining judgment, finds that they have no tangible property.

It sometimes happens that the property turns out to be really valuable, and, in this case, the original stock having all been taken, the plan of operations is just the reverse of that stated. The telegrams are as blue as possible, the officers tell the stockholders confidentially that things are working badly, and advise them to close out their stock and make the best of a bad bargain. When prices have fallen low enough, the stock is all bought in very quietly, the company—now centered in a few individuals—reorganized on an economical basis, its true character gradually disclosed, and it becomes, much to the chagrin of former shareholders, a permanent and solid feature on the stock exchange. Thus, either way, the public is victimized and the operator enriched.

The *Cairo Democrat* speaking of Gold-mining in the South says, it "is likely to become an important enterprise in some of the Southern States. The existence of gold in Virginia, North Carolina and Georgia has been known ever since the discovery of the country, and mining has been prosecuted, to some extent, for many years. It now seems that a new interest has been awakened in this matter, and we have reports of companies forming, in various places, to prosecute the business on an extensive scale. A Fredericksburg (Va.) journal states that there will probably be seventeen mines in operation in the counties of Spottsylvania, Culpepper, Orange, and Louisa (Virginia), before the 1st of November. Enterprises of a similar character are announced in the other States before mentioned. It may be that Northern energy, which is at the bottom of the new movement, will discover gold in paying quantities. The mines have never been thoroughly tested, and it is not improbable that gold will yet form an important feature in the production of the South."

Of the Gold mines at Charlotte (N. C.) a correspondent of the *New York Herald* thus discourses:

This place (Charlotte) was something of a military depot of the Confederacy during the war, and it was something more. We went this morning over to the Rudlestone gold mine, near the south end of the town. The hill, which has been worked in numerous shafts for forty years, has the appearance of an ugly rebel fortification torn all to pieces. Enormous grindstones for crushing the ore, broken wheels, troughs for washing the dust, and massive timbers lie scattered about the abandoned diggings. But at the base of the hill is a machine shop, in which a steam engine is at work, and near by from an iron pipe a continuous stream of water is pouring. It comes from a new shaft in process of excavation down to the gold-bearing vein of quartz. Two men came up out of this hole clad in oilcloth. They are waterproof, although they are very wet. "Yes, sir, if you want to get a shower bath, go down there. It is only a hundred and forty feet; another hundred will fetch the gold. Will have it by October, and then will set up our works again for getting out the gold."

Turning to another party, who seemed to be ready and qualified to give information of the enterprise, we asked him if the working of this mine

had ever paid. "Oh, yes, sir. Some of these ores have yielded as much as \$60 the ton. I have been among the mines of Colorado, and this is as good as any I saw there. From their splendid machinery they can make money at \$12 or \$15 a ton; but here, from our rude and poor machinery, that hardly pays expenses. This is very much like the sulphur quartz lodes of Colorado. With the same machinery these Carolina, Georgia and Virginia gold mines, all outcroppings of the same geological formation, would pay splendidly." "But what is that curious building there, with its zinc gasometers, its retorts, furnaces, cauldrons and vats, with their dross of copperas and other drugs? And what are those rows of huge boxes, like pyramids bottom upwards, filled with charcoal and bones and ashes and overgrown with those weeds in blossom? What funny flower pots they are!" "Those, sir, are the chemical works of the late so-called Confederate States. When the war came on the working of this gold mine was abandoned, and after a while, when the Confederate government was pinched for chemicals, they set up those works, and they got the stuff out of those shafts from which they extracted sulphur, sulphate of copper, saltpetre, etc., and from those ash boxes they ran the lye from which they made their pot and pearl ashes. They made a variety of acids and sulphates for the medical department of the army, and they were the genuine articles. All that sort of thing paid well under a close blockade; but it would not begin to pay now. And so those works remain just as Joe Johnston's surrender left them, except the things carried off."

Hard as the times are they keep a considerable woolen mill here and some manufacturing establishments in active operation. The surrounding country for a large section, elevated and wholesome, a region resting upon primitive rocks and abounding in forests of oaks, is one of the most desirable districts in the South for northern settlers; for in addition to the advantages named the lands are cheap and good, the water is delicious, and good markets are conveniently near.

4.—COTTON MANUFACTURES IN TEXAS.

A correspondent of the New Orleans *Picayune* writing from Houston, Texas, gives some cheering particulars of the progress made in that State in home manufactures. If the freed-women of color are now too good for field labor is it not possible to make them useful to us in the vocation so long followed by their *sisters* at Lowell and Fall River? The field is open to them and we expect shortly to hear of whole factories worked by buxom damsels, whose muscle a change of status has rendered unfit for the hoeing of corn and cotton. To be sure they must be intelligent, but if the men can vote, surely the women can make cloth. The writer to the *Picayune* says:

The Eureka Mills in this city are now turning out 1200 yards a day of splendid 7½ oz. osenaburgs, which they are selling by the bale at 17 cents, gold. Their domestics, 34-inch, of fine quality, almost up to State A, they sell at 16½c, currency. They have demonstrated that they can, on all heavy goods, make a good profit and undersell the New England factories. Labor is about the same as in New England, living is cheaper, and cotton costs six cents less per pound here than there, to say nothing of the cost of getting the goods back. It will be wonderful if a little more demonstration of this sort does not turn us into a manufacturing people. Indeed, the Eureka Mills are now increasing their productive capacity to 2000 yards per day. The Concordia Mills, at Hempstead, are turning out considerable cloth. The City Mills, of Houston, now nearly erected, will, by next January, produce 3000 yards per day. The Star State Mills, at Huntsville, are producing about that now. We will, ere many months, send you, Mr. Pic., our cotton in the various forms of domestics, jeans, kerseys, osenaburg, ticking, stripes,

denims, apron checks, etc., all of which we are now producing in considerable quantities.

5.—BURRSTONE QUARRIES IN GEORGIA.

Many years ago as forwarding clerk for a leading house in New Orleans we received and sent forward large quantities of French burrstone to St. Louis, Louisville and Cincinnati. The average size of the blocks then received was not over twelve inches, or a foot square and in order to make a millstone several of these cubes were cemented together. The *New York Times* has an account of the discovery in Georgia of a quarry which will turn out burrstone of superior quality, in blocks of six to ten feet surface measurement. As usual, this valuable quarry has fallen into the hands of northern capitalists and the profits derived from one of the most valuable discoveries yet made in the South will flow into the pockets of those whose enmity has for over two years outlived the suspension of hostilities. The *Times* speaks of the discovery as follows:

Another instance of the varied and valuable mineral resources of the Southern States has been furnished by a recent discovery in middle Georgia of a quarry which produces stone equal in every respect, and claimed by many to be superior, to the French burrstone. Until lately the American market has depended exclusively for its supply of burrstone on importations from France, our dealers not having the least idea that the article existed in inexhaustible quantities at their very doors. A gentleman, possessed of considerable geological experience, happening some time after the close of the war to be traveling through the South, had his attention directed to this burrstone quarry in Georgia. On examining it, he was surprised and delighted to discover that it bore a remarkable resemblance to the French stone. He then subjected it to proper tests to ascertain the nature and proportion of its component parts, and was gratified at being able to pronounce it an article of undoubted merit. The interest of several New York capitalists was next enlisted in the matter, and under their direction, a scientific examination of the quarry was made. This examination resulted in the confirmation of the first report, and in a short time thereafter a regular stock company was formed for the working of the quarry. The stone obtained from this source contains, as a general thing, less lime and iron than are found in the imported article, and, for this reason, its qualities for practical uses are said to be superior. In Georgia, both fresh and salt water formations of stone are found. Those who are familiar with the uses of burrstone understand that the fresh water formation is more compact, and contains less flint than the salt water stone. Hence, in mills, the former is employed in the grinding of materials requiring extra fineness, while the latter is used chiefly to pulverize substances that admit of a coarser grain in their consumption. Another important feature of the subject is the cost of working the quarry and delivering the stone in the market. The American Company state that in this particular they are highly favored. The quarry is situated on the Savannah River, about one hundred miles below Augusta, and is easily reached by vessels. The expense of transportation thence to New York is much less than it is from France hither, and this, in connection with other circumstances, enables the Company to offer the stone at unobjectionable rates. At present the Company employ at the quarry thirty men, but steps have been taken to increase the number to a hundred. The blocks of stone vary in size from a foot square to six and ten feet across the surface. It will perhaps be interesting to the uninitiated to know that many of the millstones in common use are not of one solid mass, but consist of several small pieces securely cemented together. Much of the stone which comes from France is in small pieces, and this is attributed, in a great part, to the

approaching exhaustion of the quarries. In Georgia, the supply has the appearance of being unlimited, and the belief is expressed that this country, at least, will never want for an abundance of the material in question.

The discovery is a valuable one, and will probably prove an incentive to still further developments of the mineral wealth of the South. Within the past ten years more than one company has been formed to operate mines in Virginia, North Carolina, Georgia, and possibly other Southern States. The failure of the South to discover the rich mineral products which abound in many sections of its soil has not only been a matter of standing comment at the North for years, but, at last, has even created surprise to its own people.

6.—CIGARS BY MACHINERY.

It may interest smokers to know that cigars, which have until now been made by hand, may hereafter be made by machinery, at a considerable saving in cost, if we can believe reports.

A cigar-making apparatus has recently been invented in Germany and patented in this country, which can, it is said, turn out one hundred and fifty thousand cigars a week.

One of these machines is now in operation in Detroit, and is thus described in a paper of that city: "The apparatus consists of several machines, through each of which the tobacco must be passed before the cigar is ready for the outside wrapper, which is put on by hand. It has a number of valuable features about it, the principal of which are that the tobacco can be worked up dry, and when the cigar is made it is ready for use; that every cigar contains an equal amount of tobacco, that cigars can be made at half the price they can by hand; and that all the stock can be worked up with no loss of material. It requires forty-five experienced cigar-makers to put on the outside wrappers as rapidly as they are made by the apparatus, which can without difficulty make twenty-five thousand cigars every ten hours. This is equal to the average work of ninety or one hundred experienced cigar-makers. It is estimated that the expense of manufacturing cigars by this machine is reduced from seventy-five to one hundred per cent., or about one-half."

ART. X.—DEPARTMENT OF IMMIGRATION AND LABOR.

1.—RESPONSES FROM EUROPE.

A CHARLESTON exchange supplies us with the following reports from the agents of the State of South Carolina in Europe, showing some of the difficulties which must be met before a steady supply of laborers can be looked for from that exhaustless depot. As our readers everywhere in the South manifest a very deep interest in the success of General Wagener's plans, and have solicited at our hands a continuation of our reprints; as from our personal acquaintance with him, and our full faith in his zeal, capacity and enterprise, we think he is the right man in the right place; and as we are, and always will be, no matter where our tent may from force of circumstances be pitched, anxiously concerned in the future of our native State, we promise to look diligently into the success of this movement, and to report fully each month in this department of the REVIEW. Having placed

ourselves *en rapport* with General Wagener, we shall in all probability be enabled to present occasionally original papers from his earnest pen, applicable not only to the adopted State he loves and serves so well, but to the entire South. The *News* says:

The following interesting letters which have been sent to us for publication will enable our readers to form an idea of the primary steps now being taken under the direction of General Wagener to induce foreign immigration to this State:

OLDENBURG, July 24, 1867.

General J. A. Wagener, Charleston:

DEAR SIR,—Having received at last the money from * * * I am able to proceed with the work before me. The pamphlet will be printed in a few days and ready for distribution. Meanwhile, I have made arrangements with Messrs. Everhard C. Delius & Co., in Bremen, who are able and willing to send vessels with emigrants direct to Charleston, as low as any other house in Bremen. These gentlemen take a great interest in a direct trade to Charleston, as they deal largely in cotton, and are willing to have their share in a direct line of steamers, as soon as the political difficulties in the Southern States are settled; until that time, there will be but a small prospect of accomplishing this object. I have traveled a little about with a view of gaining the confidence of the people for South Carolina. I have succeeded so far admirably. I have been introduced to the clergy, of all denominations, as well as to the other gentry of the different towns and villages. To these I have explained the object of my mission, and on an average they have promised a hearty co-operation in our scheme. They would advise their peasants and mechanics who desire to emigrate, to go to South Carolina, and would explain the advantages of our State to them. The pamphlet will do a great deal of good; I think it is much better than mere newspaper articles, as you will have seen from papers I have sent you. Good, substantial farmers as we desire, hardly will read those articles, or will not understand them, while, when their clergymen or their mayor explains matters to them from your pamphlets, they see better into it. But should any of those writers in the *Auswanderer Zeitung* attack our scheme, I shall not fail to answer. I am hopeful that we will succeed the first year, at least to draw a nucleus of good, substantial farmers and mechanics to South Carolina, who will then, no doubt, if they are treated right, blow our trumpet and draw thousands after them. The greatest difficulty will be the first year; after that it is easy sailing. I have appointed an agent at Bremenhaven who will distribute at once on board of every vessel that leaves with emigrants, a certain number of your pamphlets, which may induce a great many to seek South Carolina as their home. I also shall send one copy to every emigrant agent throughout Germany, and will travel myself through Germany, as far as my means will permit. Respectfully,

F. MELCHERS, Agent of South Carolina.

COPENHAGEN, July 17, 1867.

General John A. Wagener, Commissioner of Immigration, Charleston:

SIR,—I have returned to Copenhagen after a short trip in the country, and have done as much good for the cause as could be reasonably expected; but I find that if my mission shall have a good result, I must devote just as many months as now weeks to traverse the country, because the people like to talk personally to a man who has been in America, and is acquainted with the condition of the country to which they want to emigrate; and I can, in one hour, give more information and answer more of the questions, which the reading of the pamphlet naturally gives occasion for, than if I received and answered twenty letters. Especially those who have money sufficient to buy a farm are very particular in their inquiries. They wish

to know what they can expect in return for what they leave. Of 50,000 emigrants, who in the first months of the year arrived at New York, only 9,000 had no certain place of destination, and remained there; all the others were sent for by friends and relations, who had written to them and told them of their good luck and satisfaction with their new home. This is a good evidence how important it is that the immigrants who arrive in our State should be satisfied with their new home. Because if that is the case, the immigration to South Carolina will increase year for year if rightly managed. The emigration from Scandinavia is largely on the increase, and the government tries to put a stop to it by warning the people, both through the press and from the pulpit; but to no use.

The State of Minnesota has appropriated \$10,000 for the same purpose as South Carolina, and has got agents in several northern towns of Scandinavia where the emigrants pass through, but I do not believe they will derive much benefit from it, for the reason, as I have stated before, that the emigrant has determined in what section of America he wants to locate himself, before he leaves his old home; more especially such emigrants as have got means to buy a piece of land. If anything can be done for the cause it must be done in the home of the emigrant. There is the proper place to speak to him, before he is influenced by others or has determined where to go.

The summer here is unusually cold and rainy, and has retarded the hay harvest. Much of the hay is spoiled, and if it continues in this way, another short crop will be the result, and that will give a new impulse to the emigration. Very respectfully yours,

W. J. FERLOR, State Agent.

While on this subject we think it proper to append the following circular, which we find in all our Carolina exchanges:

TO THE MECHANICS IN CHARLESTON.

Gentlemen,—I am receiving numerous applications from mechanics of all branches, for information respecting their prospects in South Carolina. Such of you as can advise me, would be doing a service to our city and State by communicating with me. And I would especially respectfully request the co-operation of both mechanics societies in Charleston. By the appointment of committees to inquire into and report upon this matter, I could be put in possession of reliable views that would exercise a beneficial influence. Let me appeal to your often-tried patriotism for such assistance as you can readily afford. It will be to the interest of all, to have as many mechanics here as can be profitably employed, but I am not desirous of inducing people to come here to be disappointed. Good faith will be our truest policy. Respectfully,

JOHN A. WAGENER, Commissioner Immigration.

2.—WHAT THE SOUTH NEEDS.

Our Northern readers will please note the following from a correspondent of the Cincinnati *Commercial*, writing from Mississippi.

There was never such anxiety among Southern people for the introduction of white immigrants. Every foot of land is for sale, and its cheapness amazes one who knew something of the value of these lands in former years. The inducements offered are very great. Crops grow luxuriantly. Wheat and corn enough will be made everywhere to make food very cheap. The failure of these crops last year changed the policy of farmers. They have neglected cotton in order to have an abundance of bread and bacon. A Northern man is amazed by the productiveness of the fields half cultivated. Manures are unused and unknown: and of mechanical agencies employed in the North, the masses of the people know nothing. I am inclined to believe that the tide of emigration will slowly change its direction, or that the South will share its advantages with Northwestern States and Territories.

EDITORIAL NOTES AND CLIPPINGS.

OUR appeal for original papers, which appeared in the July and August number, has been liberally responded to by many of our old contributors and by some others whom we gladly welcome. We feel quite confident now that there will be no delay hereafter in our regular issues, as we have the promise of many friends to supply us regularly with the right material and to aid us diligently in keeping up the REVIEW and sustaining its reputation.

We have also the pleasure to announce that among the MSS. left by Mr. De Bow, several papers in continuation of his "Memories of the War" have been found, of which selections will from time to time be given in these pages. These sketches were to have been the groundwork of an elaborate history of the war, projected by our lamented friend in 1866, for which his ample notes, taken daily during the conflict, furnished abundant and comprehensive material. An examination of these manuscripts convinces us that they were but a part of this daily journal—reflections hastily recorded in moments of leisure for future elaboration, but covering a wide range of thought and foreshadowing how complete and interesting Mr. De Bow's "History of the War" would have been had he lived to accomplish his purpose.

THE Charleston *Mercury* quotes a portion of our appeal for original contributions on matters relating to the social and industrial condition and progress of the South, and adds several suggestions which we heartily commend. What this able paper says as to the necessity of showing up

the resources of South Carolina is applicable alike to every southern State. Great efforts have been made to publish the advantages of the West throughout Europe, and hence the steady tide of emigration in that direction, and the consequent increase of wealth and population. The South has hitherto been known only as a cotton growing region, and her vast capabilities for a variety of products, and for manufactures, undeniable as they are, will have to be made manifest to those whom we would entice to our farms and to our neglected and wasting water powers.

The REVIEW will gladly make room for such expositions as the *Mercury* indicates in the following extract:

"In this matter many of our friends can give the editors great and valuable assistance. They have a wide field before them. They can describe the mineral wealth of the State and show the fertility of its soil. They can show the advantages that Carolina can give to the sober and industrious immigrant. They can speak of our rivers and our inexhaustible water power. They can give statistics showing the value and price of land, the yield per acre, and what are those articles of produce which are most suitable to our climate.

They can give their farming and planting experience, so as to afford data for determining the best manner of cultivation, and the most economical manner of tilling the soil. They can show what money can be made by the establishment of mills and factories. They can write also of our internal improvements, and show what has been and is being done upon them. They can describe our financial position, and elevate the credit of our State and our people by showing the promptness and fidelity with which they have met their engagements. They can paint South Carolina as she was, South Carolina

as she is, South Carolina as she will be—if Radical whites and ignorant negroes are allowed to control her destinies. They can, in fine, through the REVIEW, speak to America and to Europe, and enable those who know us not to form a correct idea of our social, financial and political condition. In doing this, they will be vindicating themselves and their children; they will be showing Carolina as she is—rich in resources, untarnished in credit, and determined still not to give up principle for profit!"

OUR advertising columns contain the announcement of a new book from the well known commercial college of S. H. Crittenden & Co., Philadelphia. The work combines a most valuable arrangement of the rules and forms of arithmetic in daily use among business men, with new and improved methods of calculation, and a complete manual for the counting-room, replete with useful information on the many subjects enumerated in the advertisement. We are indebted to the publishers for a copy, and having carefully looked it through and tested some of the rapid methods, do not hesitate to recommend it to men of business and to the juniors of the counting-room.

DERRICK, FELGEMAKER & Co. offer in their card something new to our Southern readers, namely, a *portable pipe organ*, which is destined to supersede the use of reed organs in lodges, Sabbath-schools and parlors, wherever brought into competition with the latter, which it surpasses in durability, tone, power and sweetness. They are the most perfect instruments of the kind we have ever seen or listened to, and have secured the favorable notice and endorsement of Mr. Geo. W. Morgan, who stands at the head of his profession in this country.

WE are compelled to omit our usual book notices and other editorial notes for want of space. These matters will be attended to next month.

IMMIGRATION OF SKILLED LABORERS.—The London *Times* notices, with evident regret, the fact that emigration has once more commenced with great force, of skilled hands from the coal and iron districts of South Wales. Hundreds had already left, and many more were preparing to leave; from 80 to 90 per cent. of them for the United States. And this they are doing with a full understanding of the disadvantages under which they must just now come to the States, arising from the high prices of provisions and the general stagnation of business. But they argue, that things cannot be worse for them here than they are in Wales; and the chances are that they may much improve their condition or that of their children by emigrating; while by remaining, there is but small chance for any improvement in their own lot or that of their children. And they doubtless reason correctly. Men who have brains enough to be skilled workmen in any department of labor, and enterprise enough to come to this country under existing circumstances can hardly fail to succeed; for, if employment in mining, iron-making, or any other mechanical business is not readily furnished, there is the unfailing resource of farming for which there was never a louder demand for laborers.

The iron-masters of Wales, it is said, are manifesting considerable anxiety, and making heavy sacrifices, to keep their hands from leaving them, and are stocking the produce of their establishments, so that when any improvement in the market takes place, they may be prepared to meet the demand without inconvenience.

Says the Philadelphia *Age*:

THE stream of emigration to the West continues in a steady and uninterrupted current. In thirty-three days prior to the opening of the pre-

sent month, nearly ten thousand immigrants arrived at Columbus, Ohio. Two thousand reached there in the single week ending July 29. But of this latter number—Swiss, Prussians and Bohemians—one-quarter intended settling in different portions of Ohio, already selected, one-fifth in Missouri, and the residue in Illinois, Indiana, Wisconsin, Minnesota and Nebraska, while a few go to Kentucky. The South needs emigrants badly, and there is a rich field for labor in that section. But those leaving military despotism in the Old World, will not choose a home in a section of the new where shoulder-straps and bayonets are superior to the Constitution and all the guarantees of civil liberty. The action of the Radical party in destroying the civil governments of the Southern States has inflicted a blow upon the material prosperity of that section which is being felt in all parts of the Union.

THE New York *Tribune* is talking more reasonably about practical reconstruction. It says in a recent article:

We trust the means may be organized or created whereby Northern capital may be largely devoted to the extension of Southern agriculture. One hundred millions might be so invested in the South as to increase by at least that sum the annual production of the soil. The South will, this year, grow more grain than she ever did before, and will make, it is estimated, some 2,500,000 bales of cotton. Yet there are planters who, with a well-secured loan of \$1000, could have increased their crop by at least \$2000, giving increased employment to labour and rescuing the needy from famine. We trust that systematic efforts will be made to supply all who need loans, and can give ample security, before the opening of another season.

THE New England Farmer urges the harvesting of small grains before fully ripe. Some years ago attention was directed to this subject by experiments made by John Hannam of North Deighton, England. It is

claimed that there is a gain in weight of gross produce, thirteen and one-fifth per cent.; in weight of equal measures, nearly half per cent.; in weight of equal number of grains, nearly two and one-fifth per cent.; in quantity and value, three and one-quarter per cent.; in weight of straw, more than five per cent. In the harvest which will soon take place, there will be opportunity for every farmer to test the question for himself, by cutting a portion of his grain at that moment when the kernel or berry is fully formed, but so soft that when he squeezes it between his thumb nails he can reduce it to a pulp, and notice a slightly milky juice in the mashed mass. Then leave a portion of the grain standing ten or twelve days later, and upon threshing, cleaning up, grinding and using, carefully compare the results.

We have had the advantage, says the New York *Evening Post*, of conversing with a planter from the Lower Mississippi, a gentleman of intelligence and business habits, who after trying fairly last year the wages system upon a cotton plantation of several thousand acres, has come to the conclusion that a system of shares, or co-operation between the workmen and the capitalists, promises, if fairly administered, the best and most certain results to both. This system he has adopted the present year, and with satisfactory success so far. He gives each workman a house to live in, a garden and small field for his own tillage; he hauls the firewood and furnishes the food; this much represents the monthly wages; then he gives them one-fourth of the crop besides. The workmen and women are divided into gangs of twenty, each with a negro foreman, who is one of the twenty. This foreman reports to the general overseer the cases of absence or idleness, and an account being kept of these faults, the idlers or absentees lose at the end of the season a certain portion of their share of the cotton; but this share is divided among the remainder of the gang, so that there is no temptation for the capitalist to make wrong deductions. This plan, our informant reports, works well in every way.